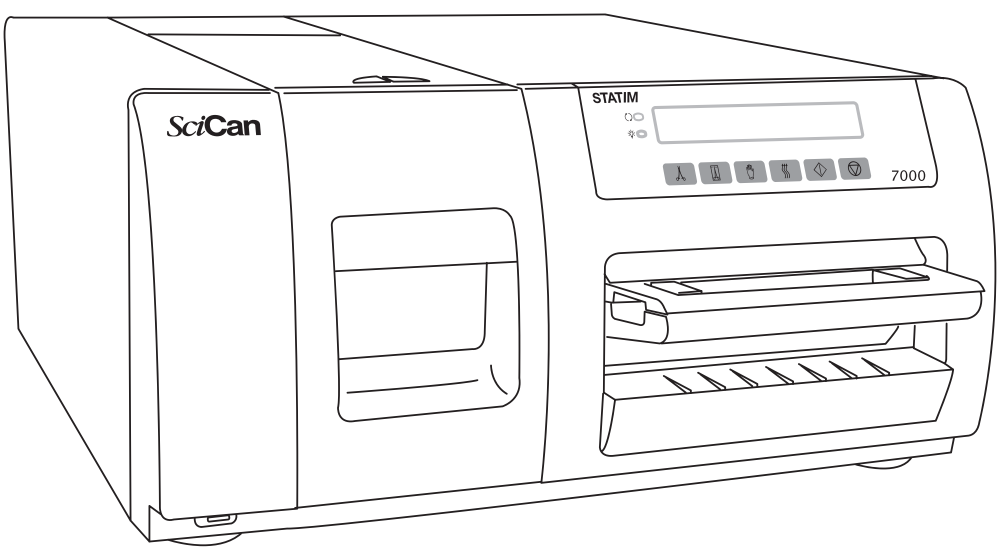
STAT*IM* 7000
CASSETTE AUTOCLAVE

• **Service Manual**



P/N 96-110784 Rev. 2.0 STAT*IM* 7000 Service Manual

SciCan
A HIGHER STANDARD

Table of Contents

For all service and repair inquiries:
In Canada: 1-800-870-7777
United States: 1-800-572-1211
Europe: +49 (0) 821 56 74 56-0
International: (416) 446-4500
Email: techservice.ca@scican.com (Canada)
techservice.us@scican.com (USA)
techservice.int@scican.com (International)

Manufactured by:
SciCan Ltd.
1440 Don Mills Road
Toronto, Ontario
M3B 3P9
Canada
Local: 416.445.1600
Toll Free: 1.800.667.7733
Fax: 416.445.2727

EU Representative
SciCan GmbH
Kurzes Geländ 10
D-86156 Augsburg
GERMANY
Phone: +49 (0) 821 56 74 56-0
Fax: +49 (0) 821 56 74 56-99

SciCan Inc.
701 Technology Drive
Canonsburg, PA 15317
USA
Phone: +1 724 820 1600
Fax: +1 724 820 1479
Toll free: 1-888-632-6031

SciCan Medtech
Alpenstrasse 16
6300 Zug
SWITZERLAND
Phone: +41 (0) 41 727 7027
Fax: +41 (0) 41 727 702

STATIM 7000 Service Manual

1. Required Information

The Statim 7000 service manual was created to act as reference for the service and repair of the Statim 7000 cassette autoclave. If you have a question about the unit you are repairing, please do not hesitate to contact your local SciCan representative for confirmation.

In order to ensure adherence to the applicable safety agency approvals, state, provincial, regional and national laws, replace components with SciCan approved parts only.

Hazardous voltages are accessible when the cover is removed. Disconnect the power cord before servicing the power mains portion of the controller board and associated devices.

If the cover is removed, a dielectric strength test (Hi-Pot) must be performed on the Statim once the cover has been returned to the unit.

If the cover is removed, a protective bonding impedance test (ground continuity) must be performed on the Statim once the cover has been returned to the unit.

Preventative Maintenance Schedule

To ensure trouble-free performance, both the technician and the operator must follow a preventative maintenance schedule.

NOTE: Please refer to your National, Regional, State or Safety laws for any additional reoccurring user testing that may be required. The schedules below describe necessary actions.

Technician		
Once a year	Cassette	• Check the tray, lid and seal for damage. Replace if necessary.
	Biological Air Filter	• Inspect the biological filter for moisture. Replace check valve and the filter if the filter is wet.
	Solenoid Valve	• Inspect the valve and clean if dirty. Replace the plunger if defective.
	Check Valve	• Remove the exhaust tube from the back of the unit. Start the Air Drying Cycle and check for air coming from the fitting. • Remove the air compressor tube from the check valve inlet while running a cycle. Make sure no steam is leaking from the valve. Replace if there are any leaks.
	Calibration	• Calibrate the unit. NOTE: For North American models, the pressure is calculated from the calibrated validation thermocouple reading. No pressure calibration equipment is needed during the calibration procedure.
	Air Filter	• Check the air filter on the back of the unit and replace if dirty.

Operator		
Daily	Run Air Dry Cycle	• It is recommended to run an Air Dry Cycle at the end of every workday to allow any residual moisture remaining in the system to dry.
	Water Reservoir	• Check the reservoir for dirt. Clean and rinse if necessary. • For ophthalmic use, drain at the end of every workday, leave empty, and refill at the start of the next workday.
	Waste Bottle	• Empty the waste bottle every time you refill the water reservoir. • You may also add some chlorine-free disinfectant.
	Exhaust Duct Filter	• Check to see if the filter is debris free. Clean if required.
	Cassette	• Clean and apply Stat-Dri as required
Weekly	Cassette	• Wash the interior of the cassette with dishwashing soap or a mild detergent that does not contain chlorine. • Scrub the inside with a cleaning pad designed for use with Teflon™ - coated surfaces. • After removing all traces of the detergent, treat interior surfaces of the cassette with the STAT-DRI drying agent to enhance the drying process. Order more STAT-DRI from SciCan quoting 2OZPLUS, 8OZPLUS, or 32OZPLUS.
	Biological Air Filter	• Check the filter for dirt and moisture. Replace if dirty. Call for service if wet.
	Condenser bottle	• The condenser bottle should be cleaned and refilled to the top of the bottle.
Every Six Months	Biological Air Filter	• Replace every 500 cycles or six months (whichever is first).
Every Year	Cassette Seal / O-Rings	• Replace every 1000 cycles or 12 months (whichever is first).
	Water Bypass Cartridge	• The Water Bypass Cartridge should be replaced annually.

2. STATIM 7000 Troubleshooting – Cycle Faults Software Revision R6xx

Cycle Fault Number	Description of Fault	Suggested steps for Correction of fault
Cycle Fault #1	The cassette temperature failed to reach 95°C within a time-out period.	This fault may be caused by a large cassette leak in conjunction with an extremely large load or a blown thermal fuse caused by weak water pump delivery. The blown thermal fuse may be the result of blocked, cracked or damaged water filter or of a leakage between chambers within water receiver housing.
Cycle Fault #3	The cassette has failed to pressurize and achieve a temperature of 110°C within a time-out period	This may be caused by a faulty cassette seal, a damaged cassette, or a failed or faulty solenoid valve (fail to close).
Cycle Fault #4	The cassette has failed to achieve sterilization conditions within a timeout period of the chamber first reaching 110°C.	This may be caused by a faulty cassette seal, a damaged cassette, or a failed or faulty solenoid valve (fail to close).
Cycle Fault #6	The software has detected the filtered Validation thermocouple temperature 5°C greater than the chamber during the sterilizing phase of a cycle.	Check for kinked or pinched exhaust tubing and for visible steam leaks from the cassette seal, lid or tray. Check the solenoid valves and make sure the plunger is not sticking. Recalibrate validation thermocouple or chamber thermocouple. Verify PCB (chamber temperature reading too low).

2. STATIM 7000 Troubleshooting – Cycle Faults Software Revision R6xx

Cycle Fault #7	If chamber temperature drops bellow the sterilization temperature (134°C /121°C) by less than 3°C, unit returns to pressurizing phase until it reaches Sterilization temperature+2°C. Following that Sterilization phase restarts. Restart of sterilization timer is done to a maximum of two times per cycle. Third time the chamber temperature drops bellow the sterilization temperature by less than 3°C, CF 7 is posted. If chamber temperature drops bellow the sterilization temperature (134°C / 121°C) by more than 3°C, CF 7 is posted.	This may be caused by a faulty solenoid valve (fails to close), a leaky cassette, a leaky pressure relief valve, and a leaky check valve.
Cycle Fault #8	The software has detected the filtered Validation Thermocouple temperature 5°C less than the chamber during the sterilizing phase of a cycle.	Check for a clogged filter screen in the cassette tray. Check the solenoid valves for debris and make sure the plunger is not sticking. Recalibrate validation thermocouple. Check PCB (chamber temperature reading too high). Check water pump (high output pump).
Cycle Fault #10	The cassette temperature has failed to drop to115°C during the Unwrapped or Wrapped Cycle or the temperature has failed to drop to 110°C during the Rubber and Plastics Cycle in the purge conditioning stage.	Probable causes are a blocked exhaust duct screen in the cassette, a pinched exhaust tube leading to the waste bottle, or a faulty solenoid valve.
Cycle Fault #11	The cassette temperature has failed to drop to 102°C within a timeout period of the end of a cycle during venting.	Probable causes are a blocked exhaust duct screen in the cassette, a pinched exhaust tube leading to the waste bottle, or a faulty solenoid valve.
Cycle Fault #12	This indicates a problem with the temperature measuring system.	Possible causes are a disconnected, broken or faulty thermocouple lead or a defective PCB.
Cycle Fault #14	The Super Heater steam temperature sensor detected a temperature above the high threshold	Possible causes are a faulty Super Heated Steam generator, faulty PCB, faulty SHS solid-state relay.

2. STATIM 7000 Troubleshooting – Cycle Faults Software Revision R6xx

Cycle Fault #15	The cassette temperature raised above the high threshold during the Sterilization phase of a cycle or above 138.6°C during conditioning or pressurizing phase of the cycle	Probable causes are a blocked exhaust duct screen in the cassette, a pinched exhaust tube leading to the waste bottle, or a faulty solenoid valve.
Cycle Fault #16	The steam generator temperature went above a threshold value.	This may be the result of blocked, cracked or damaged water filter or of a leakage between chambers within water receiver housing. Also this may be the result of a failed or weak water pump, a blocked steam generator inlet tube or a contaminated steam generator
Cycle Fault #17	The SHS heater temperature sensor detected a temperature above the high threshold	This may be the result of a failed Super heated steam heater, Solid-state relay or failed main PCB.
Cycle Fault #18	Ambient temperature to high	Ambient temperature (as sensed by the main PCB cold junction temperature sensor) increased over a preset threshold. This may be the result of a failed cool down fan, a failed SHS heater adapter board, a failed main PCB.
Cycle Fault #19	The validation thermocouple calibration is invalid. A validation thermocouple calibration is required.	This occurs when a new controller board or microprocessor has been installed. This may also happen when the unit has been subjected to a strong static discharge corrupting the memory. Calibrate the validation thermocouple.
Cycle Fault #20	The cassette temperature raised above the 138.6°C during the Drying phase of a cycle	Probable causes are a blocked filter screen in the cassette, a pinched exhaust tube leading to the waste bottle, a faulty solenoid valve, a faulty SHS heater or SHS adapter PCB, a faulty Solid state relay.
Cycle Fault #25	The software has failed to detect a need to pump water within 90 seconds of the start of the cycle	The most probable cause is a blown thermal fuse due to weak water pump delivery or a defective PCB causing constant power to the steam generator. The blown thermal fuse may be the result of blocked, cracked or damaged water filter or of a leakage between chambers

		within water receiver housing. Also, this may be caused by a flooded steam generator. In this case turn unit off for 30 sec and after that restart a cycle, this will force a priming phase.
Cycle Fault #26	The sterilization phase has failed to start within 3 minutes of the cassette reaching the sterilization temperature. CF26 is displayed when it occurred in three consecutive cycles (Cycle interrupted is displayed for the first two cycles). Cycle Fault 26 counter is reset whenever a successful cycle is completed.	This may be the result of blocked, cracked or damaged water filter or of a leakage between chambers within water receiver housing. Also this may be caused by improper validation thermocouple calibration, or by a weak water pump delivery or by a faulty solenoid valve.
Cycle Fault #27	The temperature of the steam generator failed to drop bellow a set-point temperature (150°C or 165°C) in a timeout period	This may be the result of blocked, cracked or damaged water filter or of a leakage between chambers within water receiver housing. Several other conditions may cause this: weak water pump delivery and/or out of water during a cycle, restriction to the pump inlet tube or a defective water quality sensor (sensor does not detect insufficient water in the water reservoir) or a contaminated steam generator.
Cycle Fault #32	No water pumped into the boiler while executing the Water filter priming.	This may be the result of blocked, cracked or damaged water filter or of a leakage between chambers within water receiver housing. Also a leaking water filter, leaking water reservoir connection or defective water pump may be the cause.
Cycle Fault #79	Error in communication with the RFID adapter or Seal RFID tag	This occurs when there is failure to communicate with the RFID adapter module or with the RFID tag. Possible causes include failed RFID adapter PCB, failed Seal RFID tag.
Cycle Fault #80	SHS steam did not reach a target temperature in a specified period of time during the steam-drying phase.	Possible causes include failed Super heated steam heater solid state relay, failed Super heated steam heater element, failed main PCB, Heater cartridge full with water, failed SHS adapter PCB.

2. STATIM 7000 Troubleshooting – Cycle Faults Software Revision R6xx

Cycle Fault #81	SHS steam did not reach a target temperature in a specified period of time during the air-drying phase.	Possible causes include: SHS steam thermocouple wire connection has been reversed, failed SHS heater solid state relay, failed SHS heater element, failed main PCB, Heater cartridge full with water, failed SHS adapter PCB and the thermocouple wire connection has been reversed.
Cycle Fault #82	Unit failed to cool down in a specified period of time.	Possible causes include failed Super heated steam heater solid state relay, failed Super heated steam heater element, failed main PCB, failed compressor or compressor triac.
Cycle Fault #90	Corrupted or not initialized chamber calibration value	This occurs when a new controller board or microprocessor has been installed. This may also happen when the unit has been subjected to a strong static discharge corrupting the memory. Calibrate chamber thermocouple.
Cycle Fault #98	Failure to communicate with the SHS adapter PCB.	Hardware failure. MCU not inserted properly in the socket, extract MCU, and verify pins not to be shorted. Damaged ADC converter, replace SHS adapter PCB. Verify connection to SHS adapter PCB. Failed SHS adapter PCB voltage reference.
“NO CONFIGURATION EEPROM”	Lack of communication between microcontroller and EEPROM	Hardware failure. MCU not inserted properly in the socket, extract MCU, and verify pins not to be shorted. Damaged or wrong inserted or missing EEPROM, replace software kit. Damaged controller PCB. If a PCB Adapter is used, verify that PCB adapter is properly secured in the socket and that there are no bent pins

2. STATIM 7000 Troubleshooting – Cycle Faults Software Revision R6xx

Printer Fault	Description of Fault	Suggested steps for Correction of fault
Message: PRINTER FAULT (if optional printer is installed)	Printer is not printing. If a USB memory stick is used reset the unit by turning the power off and back on. In order to reprint the last printout, enter the User Menu and select the option LAST PRINTOUT by pressing the R&P button.	This is caused by either a paper jam or a defective printer. Check that power is ON, check connector attachments.
"CYCLE ABORTED"	This error message is displayed on the printout only, followed by the message "NOT STERILE", as a result of the operator pressing the STOP button to stop the cycle or as a result of any other abnormal cycle termination, including CYCLE FAULT errors.	
"STOP BUTTON PRESSED"	The operator pressed the STOP button to stop the cycle. The LCD shows the message "NOT STERILE" as a result.	
"CYCLE INTERRUPTED"	This message is displayed when the sterilization phase has failed to start within three minutes of the cassette reaching the sterilization temperature. If it occurs in three consecutive cycles Cycle Fault #26 is displayed. Also this message is generated if a bad water conductivity or no water condition was detected for a while before water conductivity level turns back to normal. Also this message is displayed if the unit lost power before the cycle ended.	
"PRESS STOP TO RESET"	This message is displayed for all error faults. The user MUST press the STOP button on the keypad to reset the unit; otherwise the user will be unable to initiate another cycle.	

3.1 STATIM 7000 S Class Troubleshooting – Cycle Faults – Software Revision R6xx

Cycle Fault Number	Description of Fault	Probable Cause of Fault
Cycle Fault #1	The cassette temperature failed to reach boiling temperature within a time-out period.	This fault may be caused by a large cassette leak in conjunction with an extremely large load or a blown thermal fuse caused by weak pump delivery and/or contaminated steam generator or a faulty steam generator triac. The blown thermal fuse may be the result of blocked, cracked or damaged water filter or of a leakage between chambers within water receiver housing. If the triac has failed, the thermal fuse may have also failed. A faulty steam generator (steam generator resistance failed open) could also cause this fault.
Cycle Fault #3	The cassette temperature failed to reach 110ºC within a time-out period.	This may be caused by a faulty cassette seal, a damaged cassette, or a failed or faulty solenoid valves (failed to close). Verify check valve and pressure relief valves for leaks. Temperature measurement failure.
Cycle Fault #4	The cassette has failed to achieve sterilization conditions within a timeout period.	This may be caused by a faulty cassette seal, a damaged cassette, improperly installed copper tubing, failed or faulty solenoid valves (failed to close). Verify check valve and pressure relief valve for leaks. Temperature measurement failure.
Cycle Fault #10	The cassette temperature failed to drop to a floor condition during a pre-sterilization purge within a timeout period.	Check for a clogged duct in the cassette tray. Check exhaust tubing (kinked or tightly coiled). Check solenoid valves for improper connection, a failed solenoid valve (blown coil) or plunger sticking.
Cycle Fault #11	The cassette temperature failed to drop to a floor condition within a timeout period at the end of sterilization during venting.	Check for a clogged duct in the cassette tray. Check exhaust tubing (kinked or tightly coiled). Check solenoid valves for improper connection, a failed solenoid valve (blown coil) or plunger sticking.
Cycle Fault #12	This indicates a problem with the temperature measuring system.	Possible causes are a faulty PCB, a disconnected, broken or faulty thermocouple.
Cycle Fault #14	The Super Heater steam temperature sensor detected a temperature above the high threshold	Possible causes are a faulty Super Heated Steam generator, faulty PCB, faulty SHS solid-state relay.

3.1 STATIM 7000 S Class Troubleshooting – Cycle Faults – Software Revision R6xx

Cycle Fault #15	The cassette temperature rose above a ceiling temperature outside the Sterilization phase of a cycle (during conditioning or pressurizing phase of the cycle)	Probable causes are a blocked duct in the cassette, a pinched exhaust tube leading to the waste bottle, or a faulty solenoid valve.
Cycle Fault #16	The steam generator temperature rose above a ceiling temperature.	This may be the result of blocked, cracked or damaged water filter or of a leakage between chambers within water receiver housing. Also this may be the result of a failed or weak water pump, a blocked steam generator inlet tube or a contaminated steam generator
Cycle Fault #17	The SHS heater temperature sensor detected a temperature above the high threshold	This may be the result of a failed Super heated steam heater, Solid-state relay or failed main PCB.
Cycle Fault #18	Ambient temperature to high	Ambient temperature (as sensed by the main PCB cold junction temperature sensor) increased over a preset threshold. This may be the result of a failed cool down fan, a failed SHS heater adapter board, a failed main PCB.
Cycle Fault #20	The cassette temperature rose above a ceiling temperature outside the Sterilization phase of a cycle (during conditioning or pressurizing phase of the cycle)	Probable causes are a blocked duct in the cassette, a pinched exhaust tube leading to the waste bottle, a faulty solenoid valve, a faulty SHS heater or SHS adapter PCB, a faulty Solid state relay.
Cycle Fault #25	The steam generator failed to heat up to a threshold temperature within 90 seconds of the start of the cycle.	The most probable cause is a blown thermal fuse due to weak pump delivery and/or a contaminated steam generator, or improperly connected steam generator leads (loose or unconnected). The blown thermal fuse may be the result of blocked, cracked or damaged water filter or of a leakage between chambers within water receiver housing. If the steam generator triac has failed, the thermal fuse may have also failed. Verify steam generator resistance (could be failed open). Also, this may be caused by a flooded steam generator. In this case turn unit off for 30 sec and after that restart a cycle, this will force a priming phase.

3.1 STATIM 7000 S Class Troubleshooting – Cycle Faults – Software Revision R6xx

Cycle Fault #27	The pump failed to cool down the steam generator bellow a set-point temperature (150°C or 165°C) in a timeout period (during a “panic pump” condition).	Several conditions may cause this: weak pump delivery and/or out of water during a cycle, restriction to the pump inlet tube or a defective water quality sensor (sensor does not detect insufficient water in the water reservoir) or a contaminated steam generator. This may also be the result of blocked, cracked or damaged water filter or of a leakage between chambers within water receiver housing.
Cycle Fault #28	The cassette pressure rose above a ceiling value.	Pressure measurement failure. Gross pressure and/or temperature sensor mis-calibration. Unable to depressurize cassette (blocked exhaust, failed valve, etc.) This may also be the result of blocked, cracked or damaged water filter or of a leakage between chambers within water receiver housing.
Cycle Fault #30	The theoretical cassette temperature calculated from the measured cassette pressure failed to reach the sterilization temperature within 15 seconds of the cassette temperature reaching the sterilization temperature.	Poor air removal during conditioning (exhaust blockage). Pressure and/or temperature sensor mis-calibration. This may also be the result of blocked, cracked or damaged water filter or of a leakage between chambers within water receiver housing.
Cycle Fault #32	No water pumped into the boiler while executing the Water filter priming	This may be the result of blocked, cracked or damaged water filter or of a leakage between chambers within water receiver housing. Also a leaking water filter, leaking water reservoir connection or defective water pump may be the cause.
Cycle Fault #50	For the Rubber and Plastics cycle, the chamber temperature dropped below the sterilization temperature, allowing for measurement error (i.e. Tchm < 121°C).	Chamber temperature sensor mis-calibration. Poor air removal during conditioning (exhaust blockage). Not able to generate steam or a leak in the system
Cycle Fault #51	For the Rubber and Plastics cycle, the chamber temperature rose more than 4 C° above the sterilization temperature, allowing for measurement error (i.e. Tchm > 125°C).	Chamber temperature sensor mis-calibration. Unable to depressurize cassette (blocked exhaust, failed solenoid valve).
Cycle Fault #52	For the Rubber and Plastics cycle, the theoretical chamber temperature as calculated from the measured chamber pressure was more than 2°C below the measured chamber temperature, allowing for measurement error.	Pressure and/or temperature sensor mis-calibration. Unable to depressurize cassette (blocked exhaust, failed valve). Poor air removal (partial exhaust blockage).

3.1 STATIM 7000 S Class Troubleshooting – Cycle Faults – Software Revision R6xx

Cycle Fault #53	For the Rubber and Plastics cycle, the theoretical chamber temperature as calculated from the measured chamber pressure was more than 2°C above the measured chamber temperature, allowing for measurement error.	Pressure and/or temperature sensor mis-calibration. Unable to depressurize cassette (blocked exhaust, failed valve). Poor air removal (partial exhaust blockage).
Cycle Fault #54	For the Rubber and Plastics cycle, the theoretical cassette temperature calculated from the measured cassette pressure was below the sterilization temperature, allowing for measurement error (i.e. Pchm < 204.8 kPa).	Pressure and/or temperature sensor mis-calibration. Unable to generate steam, or there is a leak in the system.
Cycle Fault #55	For the Rubber and Plastics cycle, the theoretical cassette temperature calculated from the measured cassette pressure was more than 4°C above the sterilization temperature, allowing for measurement error (i.e. Pchm > 232 kPa).	Pressure and/or temperature sensor mis-calibration. Unable to depressurize cassette (blocked exhaust, failed valve).
Cycle Fault #60	For a 134°C cycle, the chamber temperature dropped below the sterilization temperature, allowing for measurement error (i.e. Tchm < 134°C).	Chamber temperature sensor mis-calibration. Poor air removal during conditioning (exhaust blockage). Not able to generate steam or a leak in the system
Cycle Fault #61	For a 134°C cycle, the chamber temperature rose more than 4 C° above the sterilization temperature, allowing for measurement error (i.e. Tchm > 138°C).	Chamber temperature sensor mis-calibration. Unable to depressurize cassette (blocked exhaust, failed solenoid valve).
Cycle Fault #62	For a 134°C cycle, the theoretical chamber temperature as calculated from the measured chamber pressure was more than 2°C below the measured chamber temperature, allowing for measurement error.	Pressure and/or temperature sensor mis-calibration. Unable to depressurize cassette (blocked exhaust, failed valve). Poor air removal (partial exhaust blockage).
Cycle Fault #63	For a 134°C cycle, the theoretical chamber temperature as calculated from the measured chamber pressure was more than 2°C above the measured chamber temperature, allowing for measurement error.	Pressure and/or temperature sensor mis-calibration. Unable to depressurize cassette (blocked exhaust, failed valve). Poor air removal (partial exhaust blockage).

3.1 STATIM 7000 S Class Troubleshooting – Cycle Faults – Software Revision R6xx

Cycle Fault #64	For a 134°C the theoretical cassette temperature calculated from the measured cassette pressure was below the sterilization temperature, allowing for measurement error (i.e. Pchm < 304 kPa).	Pressure and/or temperature sensor miscalibration. Unable to generate steam, or there is a leak in the system.
Cycle Fault #65	For a 134°C cycle, the theoretical cassette temperature calculated from the measured cassette pressure was more than 4°C above the sterilization temperature, allowing for measurement error (i.e. Pchm > 341.2 kPa).	Pressure and/or temperature sensor mis-calibration. Unable to depressurize cassette (blocked exhaust, failed valve).
Cycle Fault #70	The time maintained by the internal timer of the processor didn't match the time maintained by the external real-time clock.	Transient electromagnetic disturbance (problem won't repeat). Damaged microprocessor or crystal (STATIM Controller Board). Damaged real-time clock or crystal.
Cycle Fault #71	Pressure reading is outside the possible range	Misconnected, disconnected or damaged pressure sensor.
Cycle Fault #79	Error in communication with the RFID adapter or Seal RFID tag	This occurs when there is failure to communicate with the RFID adapter module or with the RFID tag. Possible causes include failed RFID adapter PCB, failed Seal RFID tag.
Cycle Fault #80	SHS steam did not reach a target temperature in a specified period of time during the steam-drying phase.	Possible causes include failed Super heated steam heater solid state relay, failed Super heated steam heater element, failed main PCB, Heater cartridge full with water, failed SHS adapter PCB.
Cycle Fault #81	SHS steam did not reach a target temperature in a specified period of time during the air-drying phase.	Possible causes include: SHS steam thermocouple wire connection has been reversed, failed SHS heater solid state relay, failed SHS heater element, failed main PCB, Heater cartridge full with water, failed SHS adapter PCB and the thermocouple wire connection has been reversed.
Cycle Fault #82	Unit failed to cool down in a specified period of time.	Possible causes include failed Super heated steam heater solid state relay, failed Super heated steam heater element, failed main PCB, failed compressor or compressor triac.
Cycle Fault #90	Corrupted or not initialized chamber calibration value	This occurs when a new controller board or microprocessor has been installed. This may also happen when the unit has been subjected to a strong static discharge corrupting the memory. Calibrate chamber thermocouple.

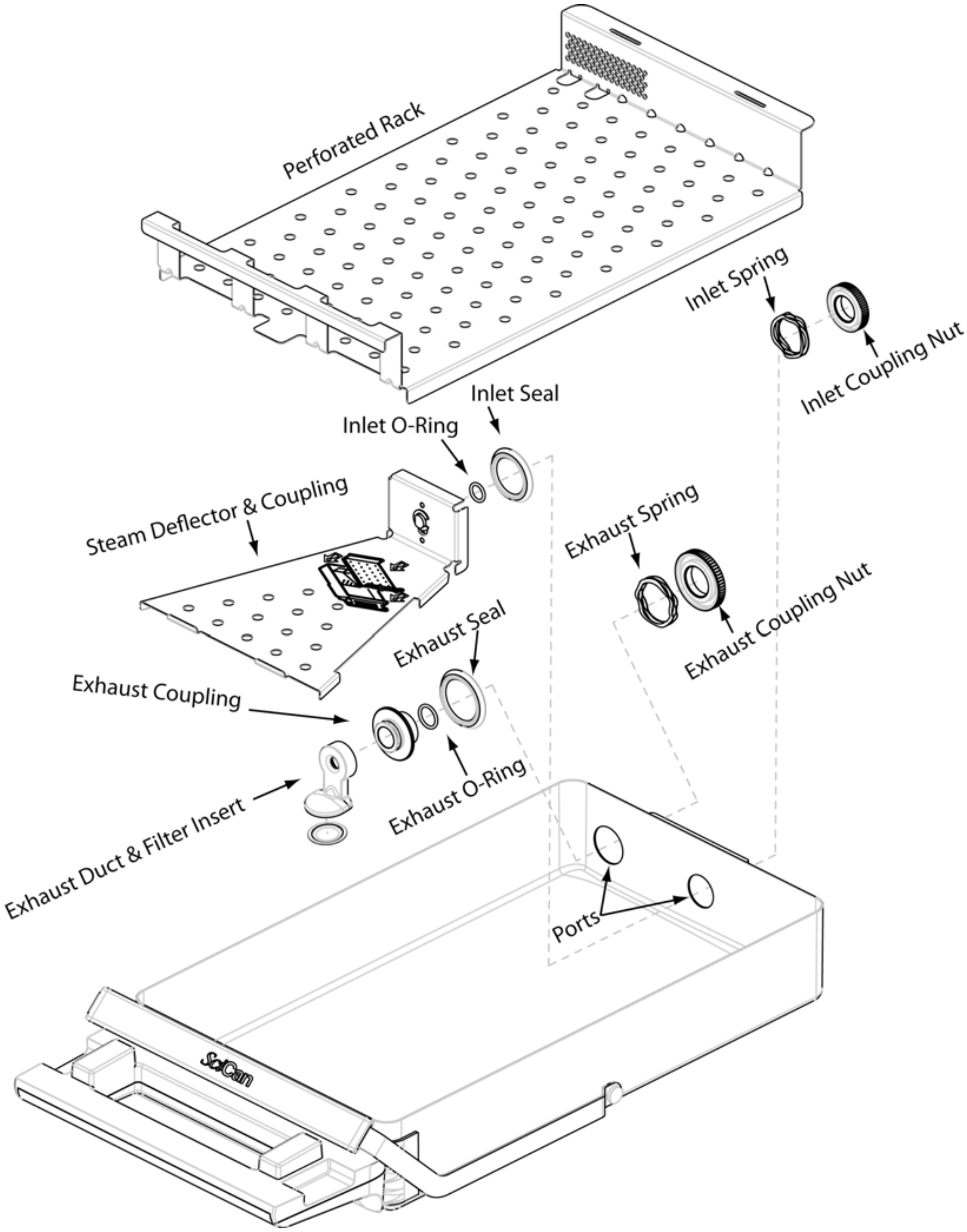
3.1 STATIM 7000 S Class Troubleshooting – Cycle Faults – Software Revision R6xx

Cycle Fault #91	Corrupted or not initialized pressure calibration	This occurs when a new controller board or microprocessor has been installed. This may also happen when the unit has been subjected to a strong static discharge corrupting the memory. Calibrate pressure sensor.
Cycle Fault #98	Failure to communicate with the SHS adapter PCB.	Hardware failure. MCU not inserted properly in the socket, extract MCU, and verify pins not to be shorted. Damaged ADC converter, replace SHS adapter PCB. Verify connection to SHS adapter PCB. Failed SHS adapter PCB voltage reference.
"NO CONFIGURATION EEPROM"	Lack of communication between microcontroller and EEPROM	Hardware failure. MCU not inserted properly in the socket, extract MCU, and verify pins not to be shorted. Damaged or wrong inserted or missing EEPROM, replace software kit. Damaged controller PCB. If a PCB Adapter is used, verify that PCB adapter is properly secured in the socket and that there are no bent pins

3.2. Statim 7000 S Class Troubleshooting – Other Printer and LCD Messages

Cycle Fault Number	Description of Fault	Probable Cause of Fault
Message "PRINTER FAULT" (If optional printer is installed)	Printer is not printing. If a USB memory stick is used reset the unit by turning the power off and back on. In order to reprint the last printout, enter the User Menu and select the option LAST PRINTOUT by pressing the R&P button.	This may be caused by a paper jam, a failed printer or failed printer electronics. Check that power is ON, check connector attachments.
"CYCLE ABORTED"	This error message is displayed on the printout only, followed by the message "NOT STERILE", as a result of the operator pressing the STOP button to stop the cycle or as a result of any other abnormal cycle termination, including CYCLE FAULT errors.	
"STOP BUTTON PRESSED"	The operator pressed the STOP button to stop the cycle. The LCD shows the message "NOT STERILE" as a result.	
"CYCLE INTERRUPTED"	This message is displayed when the sterilization phase has failed with CF6x or Cf5x. If it occurs in three consecutive cycles Cycle Fault #6x or#5x is displayed. In this case, the message “Cycle Interrupted” is followed by the CF number in brackets. Also this message is generated if bad water conductivity or no water condition was detected for a while before water conductivity level turns back to normal. Also this message is displayed if the unit lost power before the cycle ended.	
"PRESS STOP TO RESET"	This message is displayed for all error faults. The user MUST press the STOP button on the keypad to reset the unit; otherwise the user will be unable to initiate another cycle.	

4. Cassette


Perforated Rack
Inlet Spring
Inlet Coupling Nut
Inlet Seal
Inlet O-Ring
Steam Deflector & Coupling
Exhaust Spring
Exhaust Coupling Nut
Exhaust Seal
Exhaust Coupling
Exhaust O-Ring
Exhaust Duct & Filter Insert
Ports
SciCan

4.1 Replacing the Cassette Seal and O-Rings

To ensure optimum performance of the Statim 7000, the seal is equipped with an electronic RFID tag to ensure only authentic seals are used and also to provide the user with a LCD message to replace the seal after 1000 cycles. The seal and O-rings should be changed every 1000 cycles or every 12 months. Replacement seals are available from SciCan (p/n 01-110295S Cassette, Seal Kit).

When the cassette seal has undergone 1000 cycles, an early message on the LCD will display SEAL LIFE WARNING - 100 CYCLES REMAINING, with a warning beep. The seals should be changed immediately. After 1100 cycles, the unit will stop operating and a message will be displayed SEAL LIFE EXPIRED, REPLACE. Replacement seals are available from your SciCan dealer.

To change the cassette lid seal, follow these steps:

1. Place the cassette lid and the new seal on a clean work surface.
2. Examine the position of the old seal in the cassette lid and arrange the new seal in the same orientation, next to the lid.
3. Remove the old seal and discard.
4. Clean any residue out of the seal channel and flush out the channel with distilled water.
5. Lubricate the new seal with the liquid seal lubricant provided.
6. Align the RFID tag in the new seal with the holes in the lid.
7. Insert the rounded edge of the seal under the round lip of the lid.

NOTE: When inserting the seal, seven round nibs should be visible. The nibs should fit flush with the lid’s outer surface. Ensure the seal is completely inserted. Feel around the periphery to ensure the seal is securely seated.

To change the cassette tray seals (O-rings), follow these steps:

1. Remove the perforated rack (01-110294S)
2. Remove the tray exhaust duct (01-110297S)
3. Unscrew the exhaust coupling (Cassette Outlet Coupling 7000, 01-110292S) and carefully remove the O-ring and seal.

4. Find the matching seal from the kit and install onto the port.
5. Secure the exhaust coupling to the cassette ensuring the metal spring is on the outer wall of the cassette.
6. Unscrew the inlet coupling and steam deflector (Cassette Inlet Coupling 7000, 01-110291S) and carefully remove the O-ring and seal.
7. Find the matching seal from the kit and install onto the port.
8. Secure the second coupling to the cassette ensuring the metal spring is on the outer wall of the cassette.
9. Replace the exhaust duct and perforated rack.
10. The O-rings should be lubricated with the cotton swabs included in the kit if there is any resistance inserting the cassette. (p/n 01-110295S Cassette, Seal Kit)

NOTE: During a cycle, steam may appear between the lid and the tray. If this persists, remove the cassette and check that the seal is correctly installed. Be careful. The metal parts may be hot, and the cassette may contain hot steam. For the unit to function effectively, the steam deflector and perforated rack MUST be placed back in the cassette in the proper position.

4.2 Replacing the Cassette Handle

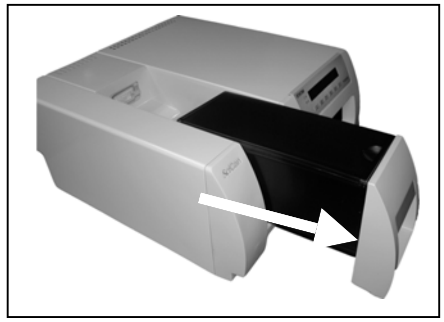
Cracked or otherwise broken Statim 7000 cassette handles can be replaced by following these steps:

1. Remove the two screws on the underside of each piece of the handle.
2. Remove the handle.
3. Separating the handle from the cassette may require pushing down forcefully on the handle.
4. Replace and re-attach.

NOTE: There are 2 screws for the lid handle and 5 screws for the tray handle. Also, the auxiliary tray handle cannot be serviced.

STATIM 7000 Service Manual
5. Removing The Cover

NOTE: If the cover is removed, a dielectric strength test (Hi-Pot) and a protective bonding impedance test (ground continuity) must be performed when the cover is returned to the unit. If you do not have the required equipment, return the unit to SciCan.

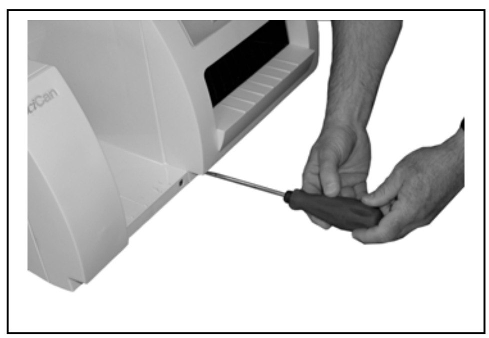


1. With the unit off, unplug the power cord from the wall outlet and remove the cassette and reservoir from the unit.



2. Remove the water filter or water bypass cartridge (if the unit is using distilled water) from the reservoir area.

3. Remove the eight screws across the bottom front of the unit using a Philips screwdriver.



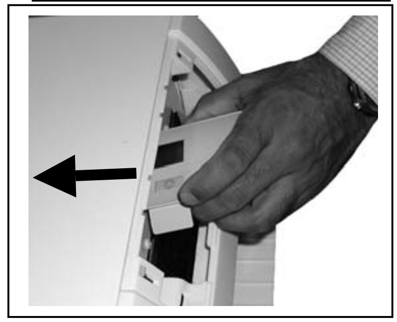
4. Push the cover forward from the back a little to loosen it, until it stops.

5. Detach the LCD/keypad by reaching up inside the cover through the armature opening to feel for a plastic tab located directly behind the Rubber and Plastics key.



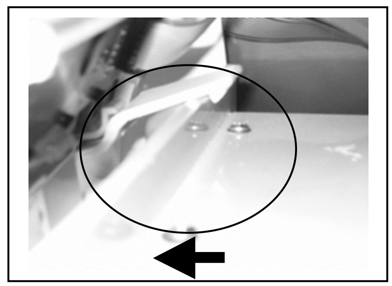


6. Push this tab to the left to unlock the LCD/keypad from the cover.

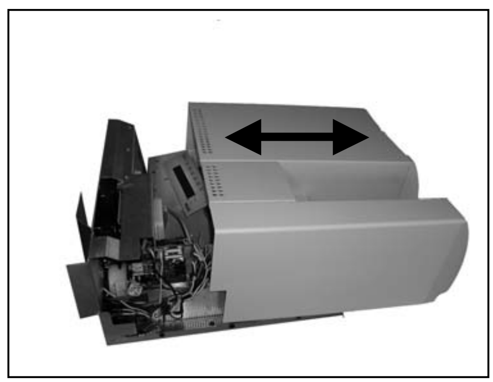


7. Place the LCD/keypad on top of the armature so that it is out of the way as you remove the cover.

8. Release the cover retention clip by reaching up inside the cover though the armature opening and pushing up on the tap located on the left most side of the opening.



9. Push the cover all the way forward to slide it off from the front.



10. To replace the cover. Place the cover back on to the unit about 1 inch away from the back. Once the chassis hooks engage with the cover, push the cover towards the back until the back of the cover is in line with the back of the chassis.

11. Replace the LCD panel.

12. Insert the 8 screws that were originally removed.

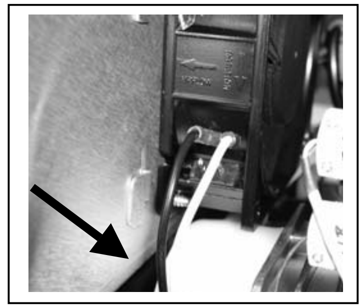
13. Perform a dielectric strength test (Hi Pot) and a protective bonding impedance test (ground continuity).

6. Rear Chassis Cover Plate

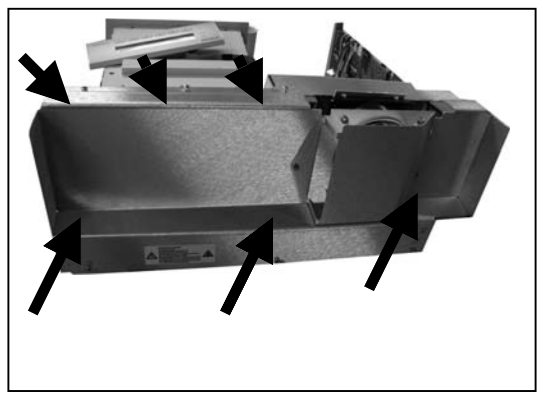
Accessing the components behind the armature will require the removal of the rear chassis cover plate. To remove this plate, follow these steps.

1. Power **OFF** the unit, unplug it and remove the cover. See chapter 5. Removing The Cover.

   NOTE: The steam generator and auxiliary heater may be hot if the unit has been operating.



2. Disconnect the 2 black and white fan wire connectors.
3. Use caution not to damage the fan and wire connectors.
4. Cut the cable ties and disconnect the tubing from the compressor elbow and steam generator check valve.
5. Remove the three screws across the top and the three screws across the bottom of the plate.



6. Lift the plate to remove.



7. Reverse instructions to replace.

7. Membrane Keypad and LCD

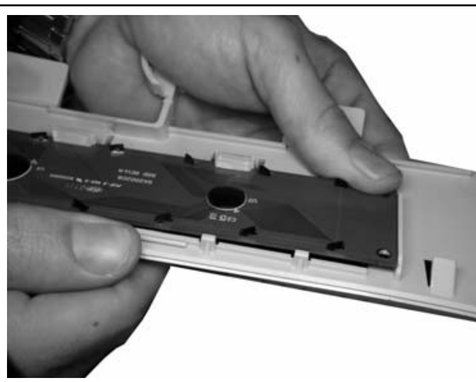
The membrane keypad and LCD contain circuitry that is static sensitive.

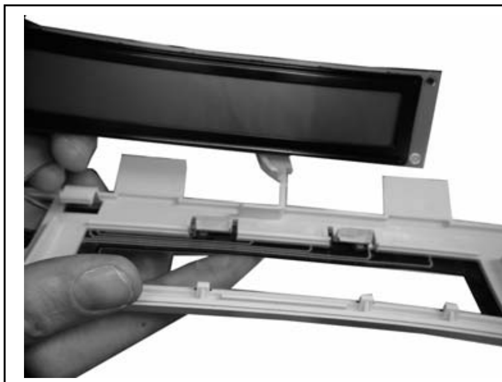
Always wear a static strap when working with or near this circuitry. Transport electronic components in a static protected bag.

To replace the membrane keypad or LCD, perform the following steps:

1. Remove the cover as outlined in chapter 5.
2. Remove the screw from the membrane tie-down.
3. Disconnect LCD connection from controller board.
4. Disconnect the membrane keypad connection from the controller board.
5. Disconnect the other membrane keypad connection from the auxiliary heater board.
6. Gripping the membrane keypad facedown and lengthwise with both hands, gently bend the sides back to release the LCD from its holding clips.

NOTE: The LCD and membrane keypad are considered separate components.

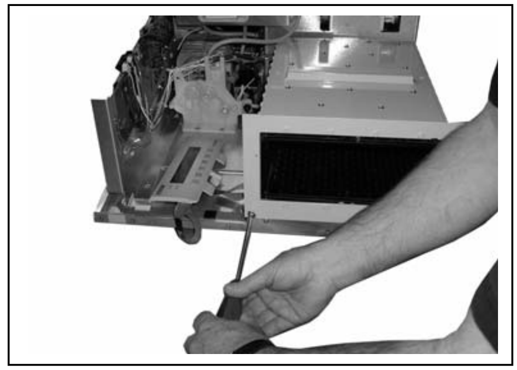


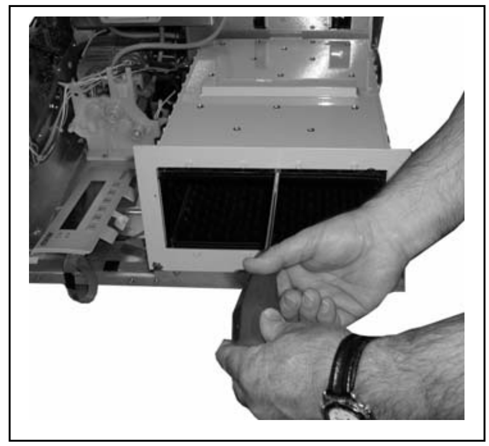


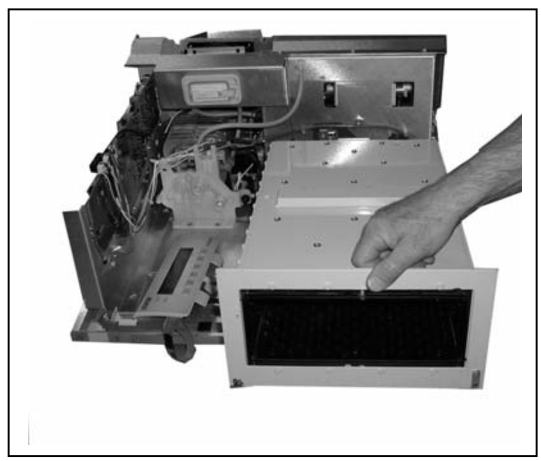
8. Armature

To remove the armature, follow these steps:

1. Power **OFF** the unit, unplug it and remove the cover. See chapter 5. Removing The Cover.
2. Remove the screws located in each of the armature’s bottom corners.
3. Loosen the screw located at the center of the armature’s front top edge.
   NOTE: this screw is very long and can not be completely removed.
4. Slide the armature forward.
5. Reverse removal instructions to replace.

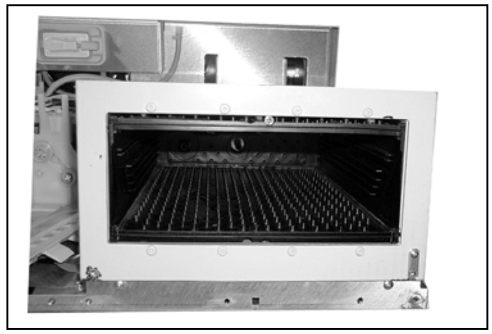




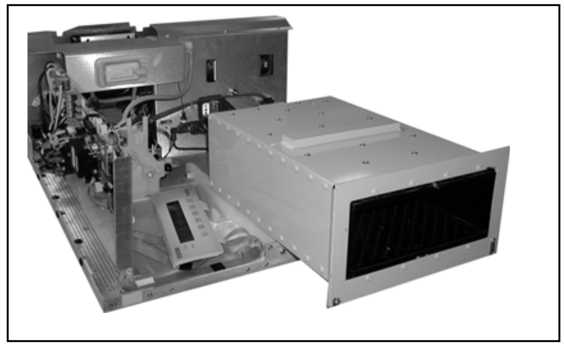


9. Isoplate

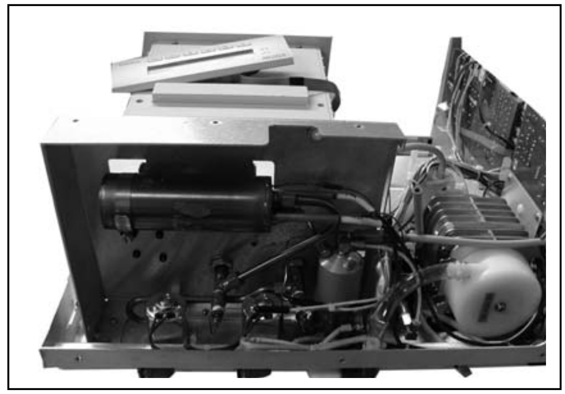
To remove the isoplate from the armature, follow these steps:



1. Remove the armature from the chassis and place it on a secure work surface. See chapter 8. Armature.
2. The isoplate is secured in the armature using screws with washers, on the top and bottom of the armature. Remove and retain all the screws with washers.
3. When all fasteners are removed, slide the isoplate out of the armature.
4. Reverse removal instructions to replace.



10. Steam Generator

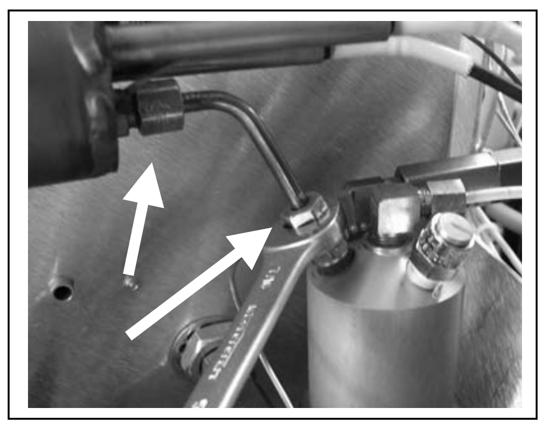


To remove the steam generator, follow these steps:

1. Power **OFF** the unit, unplug it and remove the cover. See chapter 5. Removing The Cover.
   NOTE: The steam generator and auxiliary heater may be hot if the unit has been operating.
2. Remove the rear chassis cover plate. See chapter 6. Rear Chassis Cover Plate.
3. Disconnect the steam generator thermocouple from the controller board.
4. Cut the tie wraps holding the steam generator thermocouple.
5. Disconnect black steam generator thermal fuse wire from controller board connector terminal block.



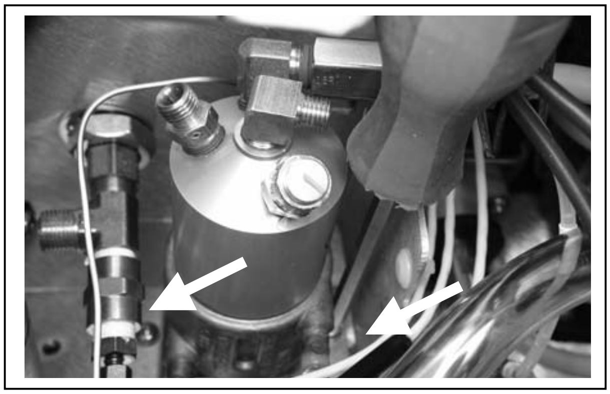
6. Disconnect the white steam generator wire from the upper terminal in the steam generator.
7. Disconnect, at both ends, the copper tubing connecting the steam generator to the auxiliary heater.



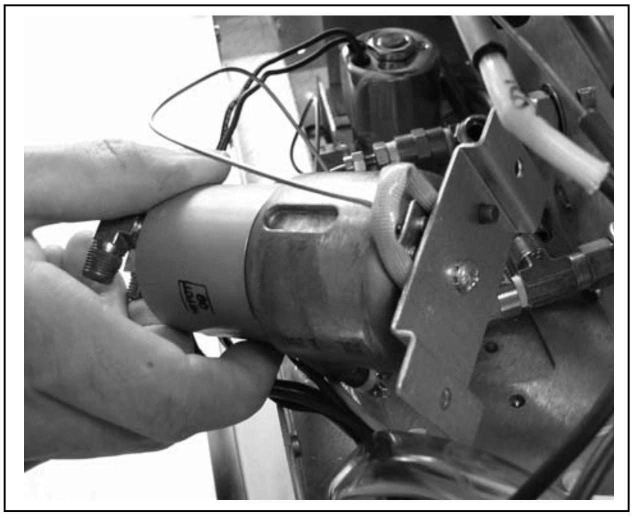
8. Disconnect the compression nut from the Teflon™ inlet tube.



9. Remove the two screws that hold the steam generator to the chassis.



10. Remove the steam generator.



11. Reverse removal instructions to replace.
12. After you install a new steam generator, calibrate the unit. See chapter 29, Statim S-Class Calibration or 30, Statim 7000 Calibration (depending on your unit).

11. Steam Generator Check Valve



To inspect the check valve, turn ON the compressor using the keypad, and allow the unit to run for a few minutes. Allow the unit to cool to the touch. Remove and inspect the air filter, the bacteria retentive filter and the compressor. See chapter 26. Compressor.

If there is evidence of water in the bacteria retentive filter, replace the steam generator check valve and the filter. If there is evidence of water in the compressor or if the compressor filter is wet, replace the steam generator check valve, compressor and filters.

To Remove the Steam Generator Check Valve, follow these steps:

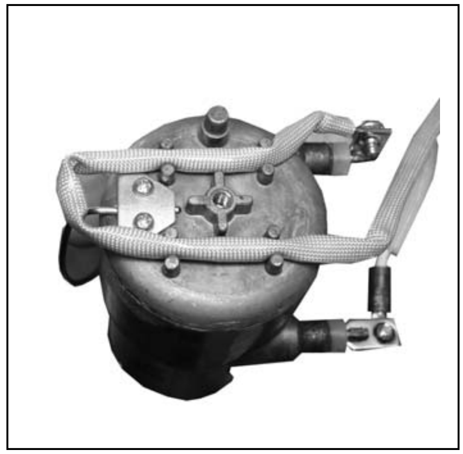
1. Power OFF the unit, unplug it and remove the cover. See chapter 5. Removing The Cover.
   NOTE: The steam generator and auxiliary heater may be hot if the unit has been operating.
2. Remove the rear chassis cover plate. See chapter 6. Rear Chassis Cover Plate.
3. Carefully cut the cable tie holding the compressor tube onto the check valve inlet and pull the tube off the valve.
4. Disconnect the check valve. NOTE: Apply the wrench to the part of the valve closest to the steam generator.

To Replace the Steam Generator Check Valve, follow these steps:

1. Prepare the right angle fitting by wrapping the threads with Teflon pipe fitting tape (minimum one complete wrap).
2. Thread the new valve onto the right angle valve fitting in the top of the steam generator. Using a wrench on the end of the valve closest to the fitting, tighten the valve SNUG. Do not overtighten the new valve. Use a wrench to hold the right angle brass fitting so it does not move.
3. Carefully push the compressor tube onto the check valve and secure the tube to the valve using a high temperature application cable tie.
4. Install replacement filters as required.

STATIM 7000 Service
12. Steam Generator Thermal Fuse

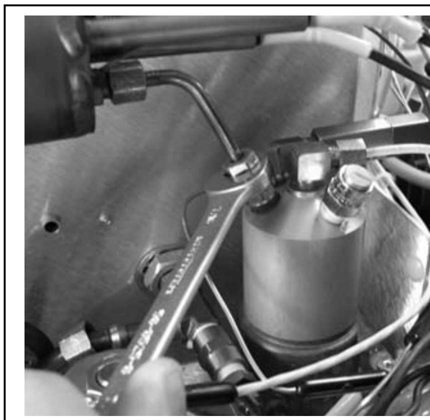
To remove the steam generator thermal fuse, follow these steps:



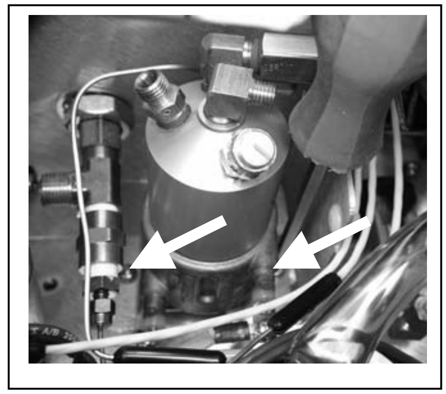
1. Power **OFF** the unit, unplug it and remove the cover. See chapter 5. Removing The Cover.
   NOTE: The steam generator and auxiliary heater may be hot if the unit has been operating.
2. Remove the rear chassis cover plate. See chapter 6. Rear Chassis Cover Plate.
3. Disconnect the black thermal fuse lead wire from Controller Board connector terminal and the white wire from the steam generator.
4. Trace the path of the black wire back to the base of the steam generator. Cut all the cable ties holding the black wire.
5. Disconnect the compression nut holding the Teflon tube from the top of the steam generator.



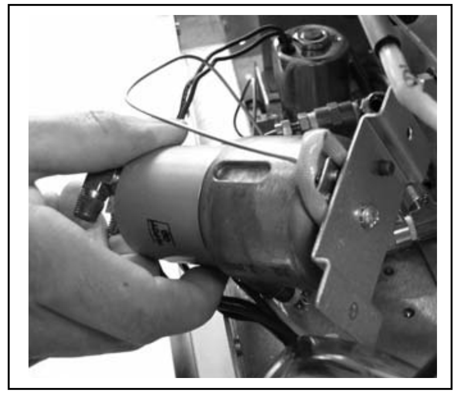
6. Disconnect, at both ends, the copper tubing connecting the steam generator to the auxiliary heater.



7. Remove the two screws from the steam generator bracket. NOTE: The steam generator is still attached to the Controller board by the thermocouple lead.

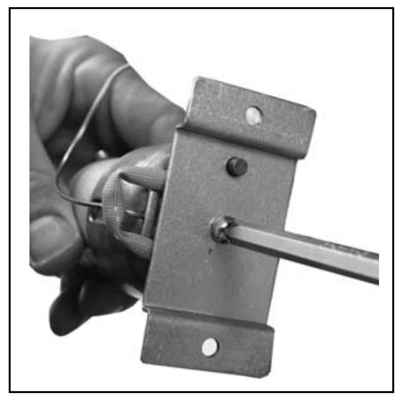


8. Carefully cut the two cable ties closest to the steam generator that hold the thermocouple leads together.

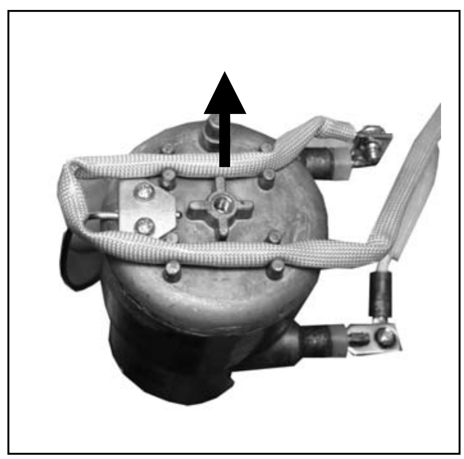


9. Gently lift and turn the steam generator assembly onto one side to expose the bottom of the assembly. **Be careful not to stress the thermocouple leads. (Min. bend radius - 3/16 inch / 5 mm).**

10. Remove the small screw that attaches the steam generator bracket to the steam generator.



11. Remove the fuse assembly. Note the wiring configuration and the location of the actual fuse (a large bump in the tube). When you reassemble the unit, the thermal fuse must be between the spacing stand-offs on the bottom of the steam generator. Be careful not to pinch the wire or crush the fuse.



12. Reverse removal instructions to replace.

13. Pressure Relief Valve

To remove the pressure relief valve from the steam generator, follow these steps:

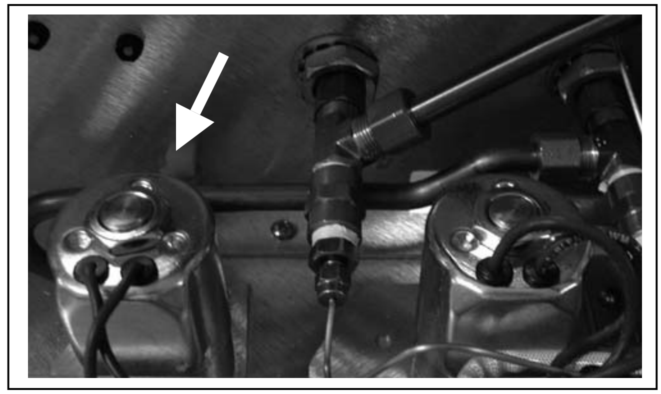


1. Power **OFF** the unit, unplug it and remove the cover. See chapter 5. Removing The Cover.
   NOTE: The steam generator and auxiliary heater may be hot if the unit has been operating.
2. Remove the rear chassis cover plate. See chapter 6. Rear Chassis Cover Plate.
3. Using a wrench, remove the pressure relief valve.
4. Reverse removal instructions to replace.



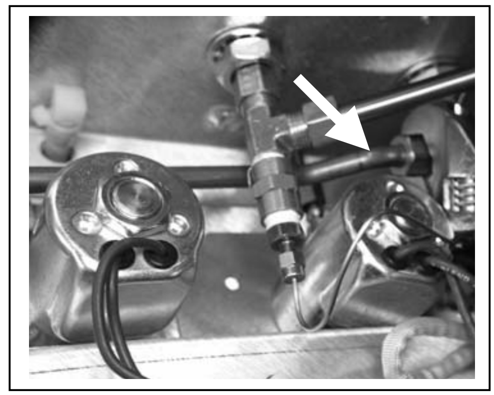
NOTE: It is important not to over-tighten the pressure relief valve. Hand-tighten first, and then use the wrench until it feels tight to a maximum of 2 turns.

14. Chamber Solenoid Valve

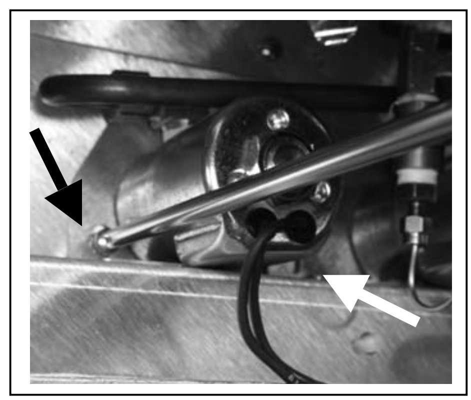


To remove the Chamber Solenoid (the solenoid on **left** when facing the back of the unit), follow these steps:

1. Power **OFF** the unit, unplug it and remove the cover. See chapter 5. Removing The Cover.
   NOTE: The steam generator and auxiliary heater may be hot if the unit has been operating.

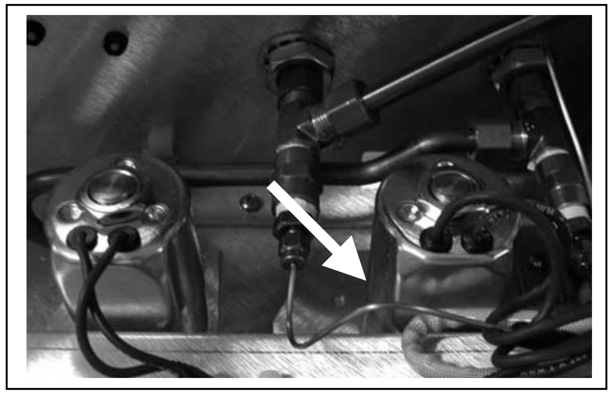


2. Remove the rear chassis cover plate. See chapter 6. Rear Chassis Cover Plate
3. Carefully cut the cable ties holding the chamber solenoid leads to the Auxiliary Heater Controller Board terminal block (wires 15 and 16).



4. Disconnect the copper tubing at the T-fitting junction.
5. Remove the 2 screws that attach the chamber solenoid valve bracket to the chassis.
6. Remove solenoid.
7. Reverse removal instructions to replace.

15. Validation (1 Exhaust) Solenoid Valve



To remove the Validation Solenoid (solenoid on **right** when facing the back of the unit), follow these steps.

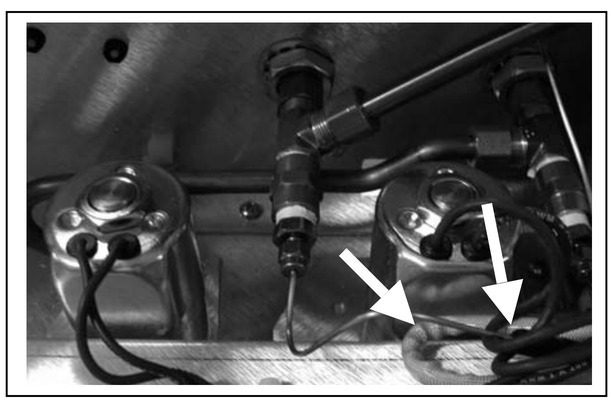
1. Power **OFF** the unit, unplug it and remove the cover. See chapter 5. Removing The Cover.
   NOTE: The steam generator and auxiliary heater may be hot if the unit has been operating.
2. Remove the rear chassis cover plate. See chapter 6. Rear Chassis Cover Plate



3. Carefully cut the cable ties holding the validation solenoid leads and disconnect the validation solenoid from the main Controller Board terminal block (wires 7 and 8).
4. Disconnect compression nut on the copper tube at the base of the solenoid.

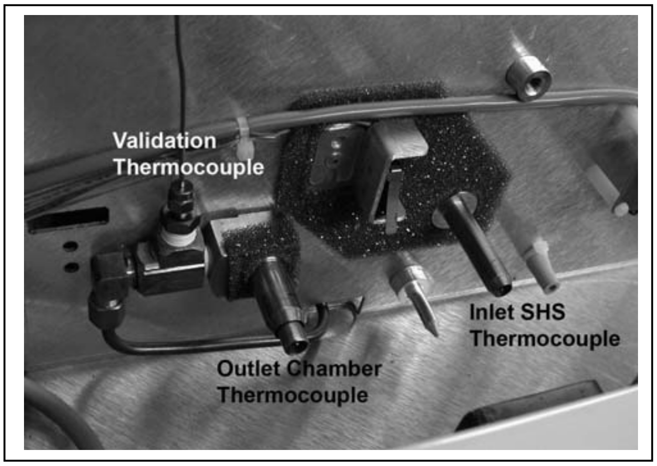


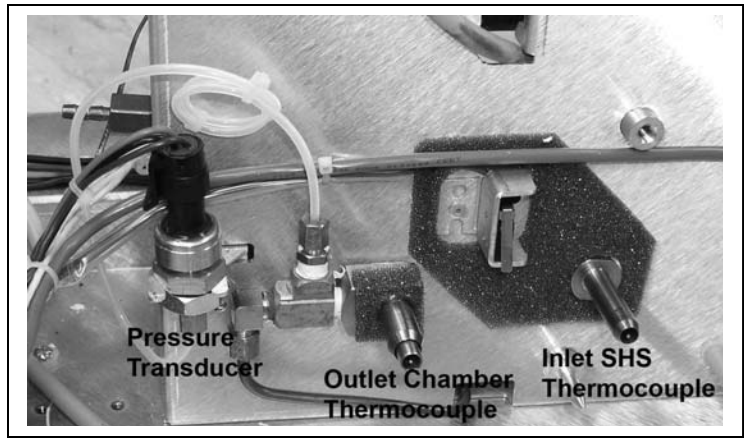
5. Remove the 2 screws that attach the validation solenoid valve bracket to the chassis.



6. Remove solenoid.
7. Reverse removal instructions to replace.

16. Thermocouples & Pressure Transducer

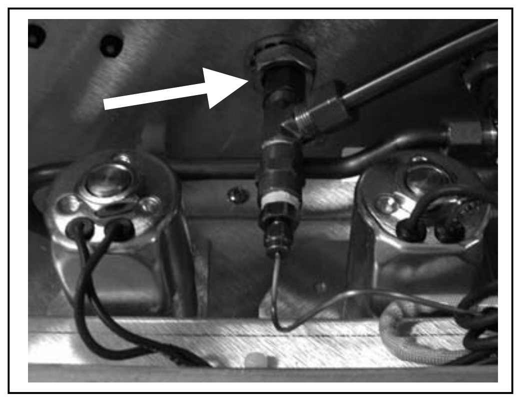




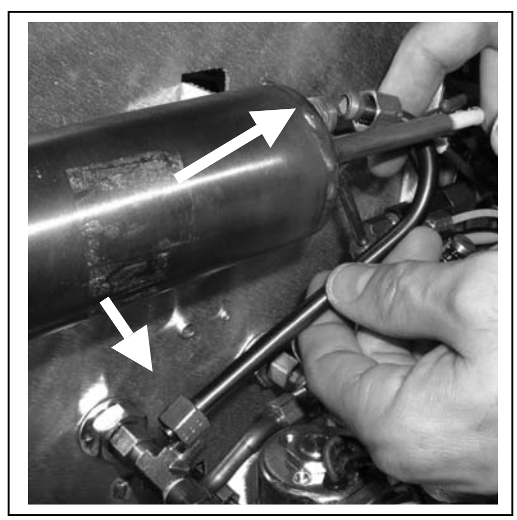
The Statim 7000 has three thermocouples, as shown above.

The Statim 7000 S-class model has two thermocouples and one pressure transducer as shown above.

16.1 Inlet SHS Thermocouple

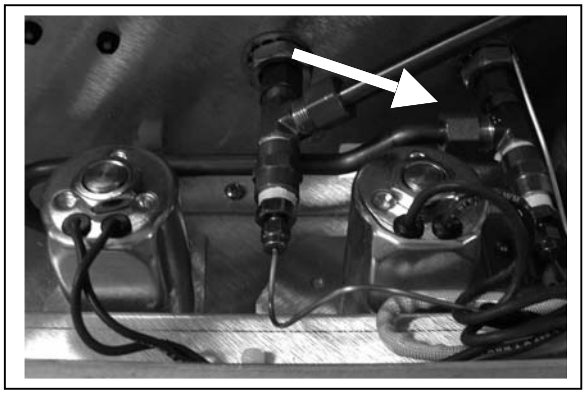


1. Power **OFF** the unit, unplug it and remove the cover. See chapter 5. Removing The Cover.
   NOTE: The steam generator and auxiliary heater may be hot if the unit has been operating.
2. Remove the rear chassis cover plate. See chapter 6. Rear Chassis Cover Plate
3. Carefully cut the cable ties holding the auxiliary heater thermocouple leads and disconnect from the Auxiliary Heater Controller Board.
4. Disconnect the stainless steel tube, at both ends, connecting the auxiliary heater to the T-fitting.
5. Disconnect the auxiliary thermocouple assembly from the rear chassis by securing the T-fitting while removing the compression nut.

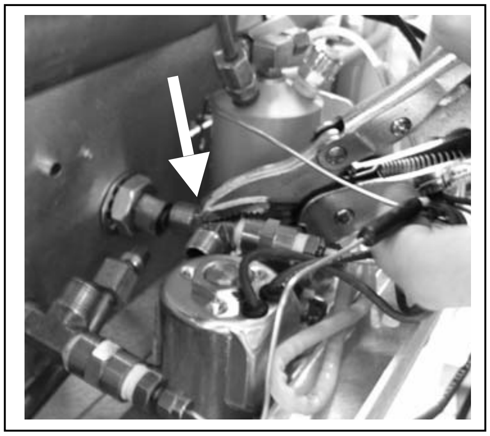


6. When replacing, verify the final position of the thermocouple tip. (When viewed through the open T-fitting connection, with the stainless steel tube not yet installed, the thermocouple should be approximately to the middle of the T-fitting and should not be in contact with inside wall.)
7. The tip of the thermocouple should be close to the edge of the probe, but not outside of the probe body.
8. After you install a new thermocouple, calibrate the chamber thermocouple, and pressure transducer or validation thermocouple. See chapter 29, Statim S-Class Calibration or chapter 30, Statim 7000 Calibration (depending on your unit).

16.2 Outlet Chamber Thermocouple



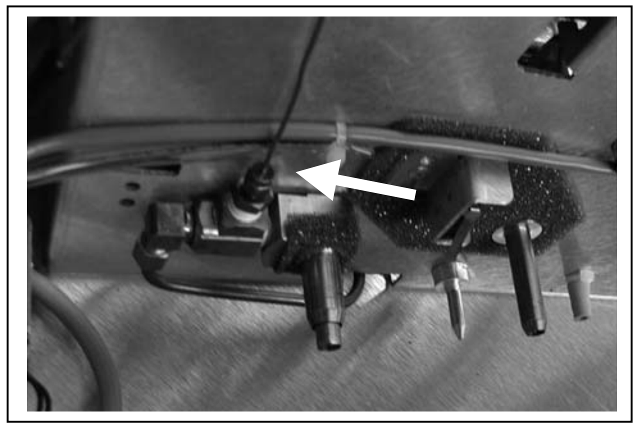
1. Power **OFF** the unit, unplug it and remove the cover. See chapter 5. Removing The Cover.
   NOTE: The steam generator and auxiliary heater may be hot if the unit has been operating.
2. Remove the rear chassis cover plate.
   See chapter 6. Rear Chassis Cover Plate.



3. Carefully cut the cable ties holding the chamber thermocouple wire and disconnect from the Controller Board.
4. Disconnect the compression nut on the copper tubing to the auxiliary heater thermocouple and slide the solenoid with the copper tubing attached, to the left.
5. Remove stainless steel tube, at both ends, connecting the auxiliary heater to the T-fitting for easier access to the chamber thermocouple.
6. Disconnect the chamber thermocouple assembly from the rear chassis by securing the T-fitting while removing the compression nut.

7. Secure the T-fitting while removing the compression nut.
8. When replacing, verify the final position of the thermocouple tip. When viewed through the open T-fitting connection, the stainless steel tube (not yet installed) the thermocouple should be approximately to the middle of the T-fitting and should not be in contact with inside wall of the T-fitting.
9. The tip of the thermocouple should be close to the edge of the probe, but not protrude the probe body.
10. After you install a new thermocouple, calibrate the unit. See chapter 29, Statim S-Class Calibration or 30, Statim 7000 Calibration (depending on your unit).

16.3 Validation Thermocouple

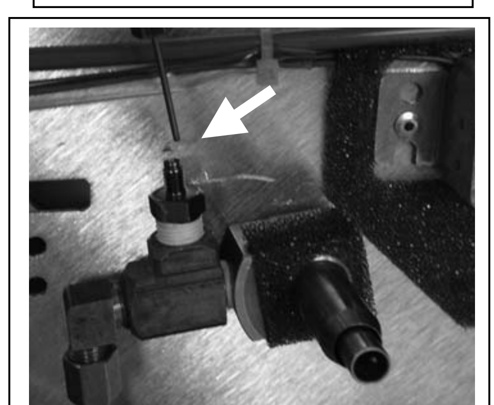


1. Power **OFF** the unit, unplug it and remove the cover. See chapter 5. Removing The Cover.
   NOTE: The steam generator and auxiliary heater may be hot if the unit has been operating.
2. Remove the rear chassis cover plate. See chapter 6. Rear Chassis Cover Plate.



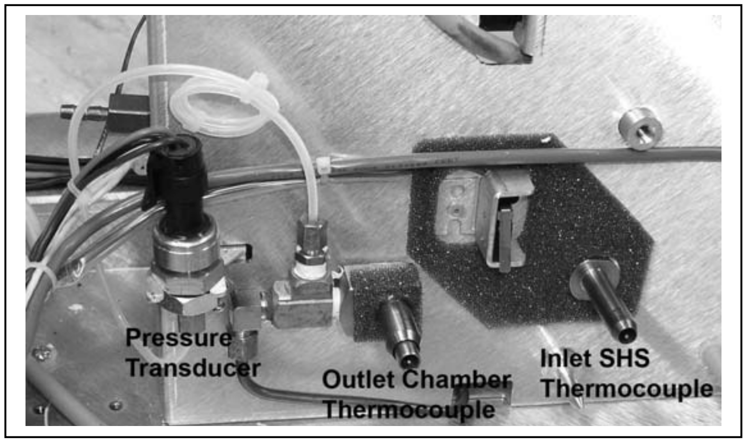
3. Remove Armature. See chapter 8. Armature.
4. Loosen smaller top nut to remove validation thermocouple.
5. Remove the validation thermocouple.
6. When replacing, verify the final position of the thermocouple tip.

   (The new validation thermocouple should be inserted until it hits the bottom of the fitting, then pulled back up 0.2“ / 5 mm.
7. The compression fitting is then tightened while TC is in this position (which should place it roughly in the middle of the fitting's bore).



8. After the new thermocouple is installed calibrate the unit. See chapter 30, Statim 7000 Calibration.

16.4 Pressure Transducer Checking the Pressure Transducer



To check the pressure transducer, follow these steps:

1. Start any sterilization cycle. Allow the cycle to enter the sterilization phase of the cycle and record the temperature and pressure readings shown on the LCD.

2. Refer to Chart A. Match recorded temperatures with the chart temperatures and compare pressure readings. If recorded pressure readings are within ± 7 kPa of the chart pressure readings, the transducer is operational. If not, it must be replaced.

Chart A		
	Temperature Displayed (C°)	Pressure Displayed (kPa)
Rubber and Plastics Cycle	121 122 123 124 125	205 211 128 225 232
Wrapped, Unwrapped	134 135 136 137 138	304 313 322 332 341

16.5 Removing the Pressure Transducer

1. Power OFF the unit, unplug it and remove the cover. See chapter 5. Removing The Cover.

   NOTE: The steam generator and auxiliary heater may be hot if the unit has been operating.

2. Remove the rear chassis cover plate. See chapter 6. Rear Chassis Cover Plate.
3. Disconnect the transducer wires from the controller board “Press” terminal block.
4. Disconnect the compression nut holding the coiled transducer tube, from the bottom of the transducer.
5. Remove the transducer nut and washer securing the transducer to the bracket.
6. Should removal of the transducer bracket be necessary, remove the screw and washer holding the bracket to the chassis .
7. Discard the transducer.

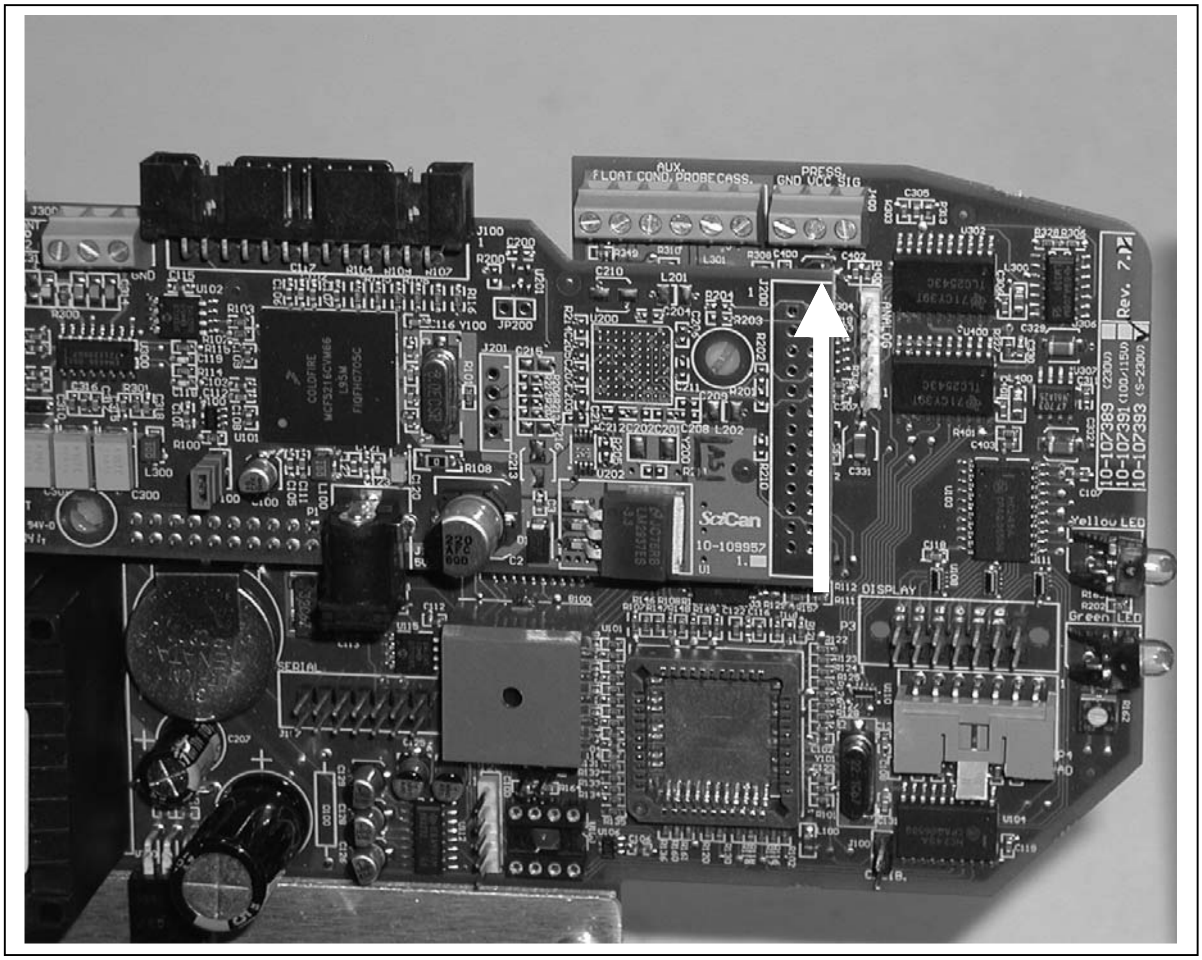
16.6 Replacing the Pressure Transducer

To replace the pressure transducer, follow these steps:

1. Make sure the power switch OFF, and the unit is unplugged.
2. If the transducer bracket was removed, reinstall the bracket on the chassis using the screw and washer retained from disassembly.
3. Install the transducer in the transducer bracket using the nut and washer retained from disassembly and tighten.
4. Reconnect the one end of the coiled transducer tube to the bottom of the transducer. Thread the compression nut and then tighten using a wrench. Do not over tighten.
5. If required, reconnect the other end of the coiled transducer tube to the solenoid valve inlet “T” fitting. Thread the compression nut finger tight, and then tighten. Do not over tighten.
6. Check that all fittings have been tightened and that all brackets are secured to the chassis.
7. Connect the transducer wires to the Controller Board "PRESS" terminal block as follows:

    - blue wire - position J400-1 ‘SIG’ (signal),
    - red wire - position J400-2 ‘VCC’ (V+)
    - black wire - position J400-3 'GND (ground)

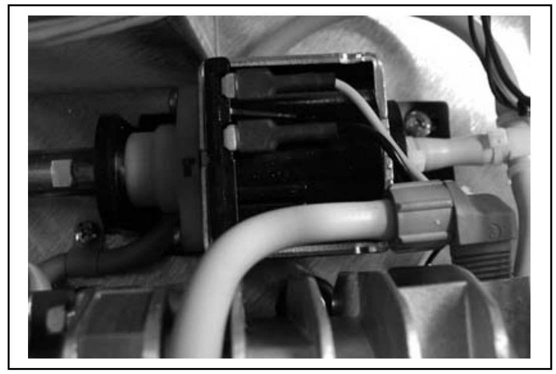
8. Reconnect the line cord and turn the power switch ON.



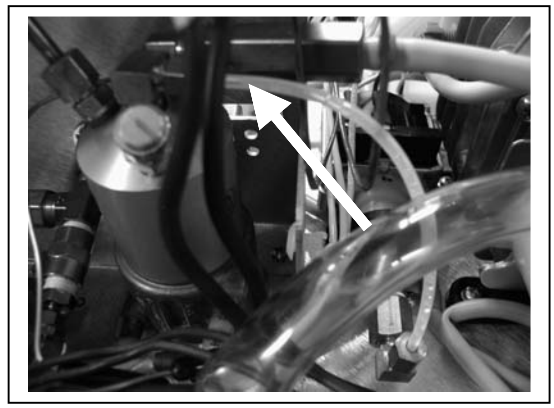
9. Run a sterilization cycle and observe all fittings and tubes for leaks. Check LCD read-out for messages indicating cycle status.
10. Calibrate the unit. See chapter 29, Statim S-Class Calibration

17. Pump

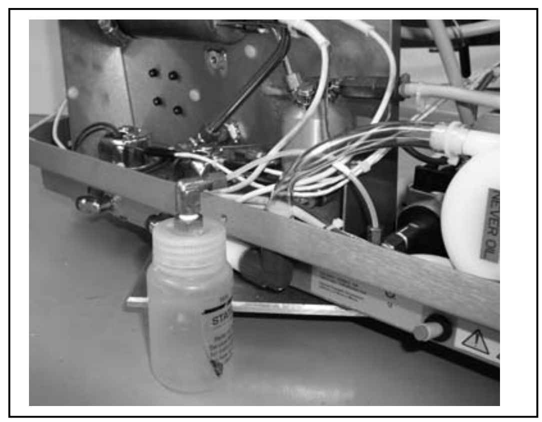
If you suspect a problem with the pump (or water delivery), follow these steps:



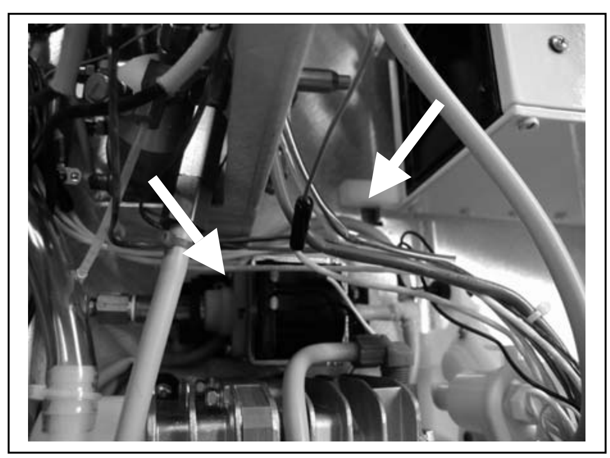
1. Power **OFF** the unit, unplug it and remove the cover. See chapter 5. Removing The Cover.
   NOTE: The steam generator and auxiliary heater may be hot if the unit has been operating.
2. Remove the rear chassis cover plate. See chapter 6. Rear Chassis Cover Plate.



3. Remove the pump tubing from the steam generator.
4. Connect the tubing to the pump test bottle.



5. Ensure there is ample water in the service kit reservoir and also that the pump/system is fully primed prior to testing and is hooked up to test bottle. The unit must be equipped with a Water Bypass cartridge (SCWFBP) otherwise the results may not be representative of the requirements

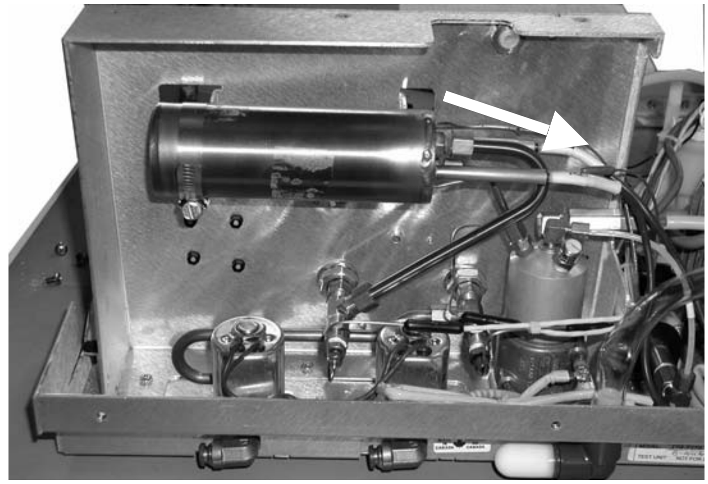


6. Power the unit **ON**, and activate the pump using the key pad. The water level within the bottle should reach the Min. Level within 17-19 seconds.
7. If the pump passes the above test, hook everything back up, then run a sterilization cycle. Verify that the

cycle completes normally and there are no leaks.

8. Replace the pump if it fails the above test.
9. Disconnect the wires and remove the 4 screws that secure the pump assembly to the chassis and make note of the pump spring position.
10. Reverse removal instructions to replace.

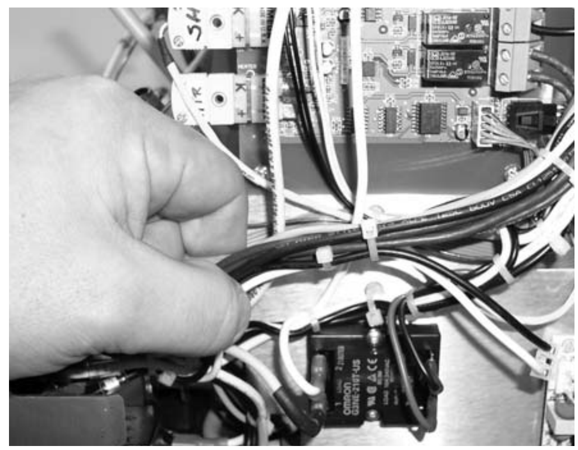
18. Auxiliary Heater



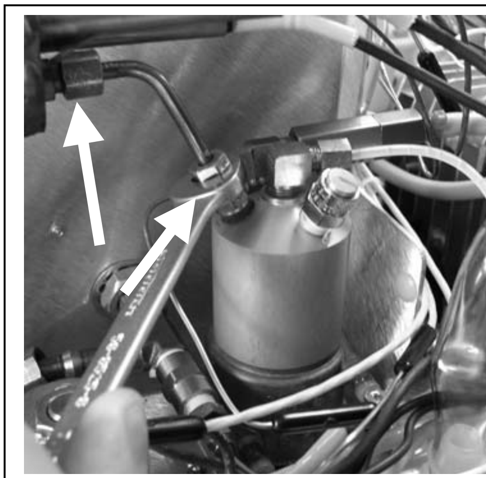
To remove the steam generator, follow these steps:

1. Power **OFF** the unit, unplug it and remove the cover. See chapter 5. Removing The Cover.

   NOTE: The steam generator and auxiliary heater may be hot if the unit has been operating.

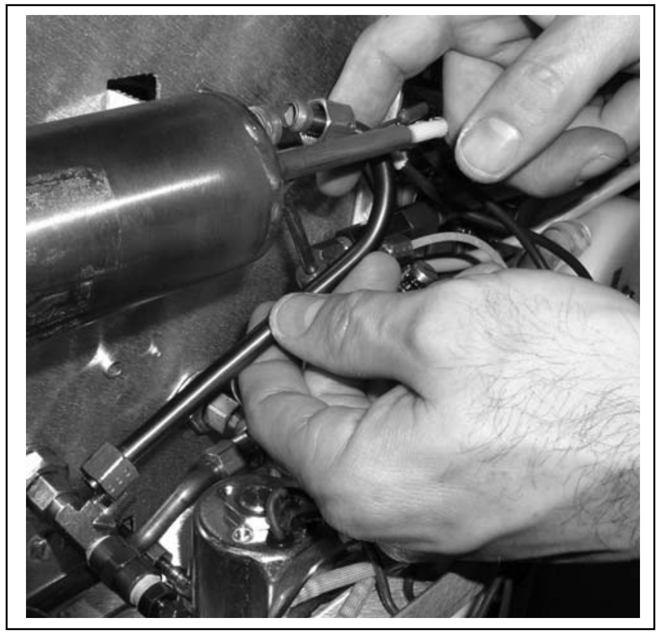


2. Remove the rear chassis cover plate. See chapter 6. Rear Chassis Cover Plate.
3. Disconnect the auxiliary heater thermocouple from the auxiliary heater board.
4. Disconnect both wires - one from the auxiliary board and one from the solid state relay.

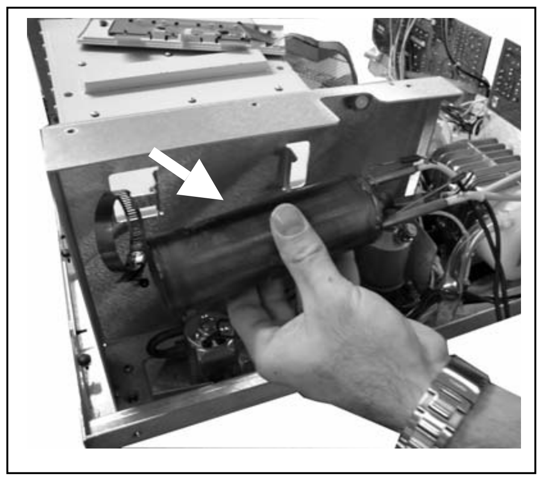


5. Cut the tie wraps holding the auxiliary heater thermocouple.
6. Disconnect the copper tubing connecting the steam generator to the auxiliary heater.

7. Disconnect the stainless steel tube, at both ends, connecting the Auxiliary heater to the T-fitting connecting the auxiliary heater to the auxiliary heater thermocouple.



8. Loosen the clamp holding the auxiliary heater to the rear chassis.
9. Remove the auxiliary heater.
10. Reverse removal instructions to replace.
11. After you install a new auxiliary heater, calibrate the chamber thermocouple and pressure transducer or validation thermocouple. See chapter 29. Statim S-Class Calibration or 30. Statim 7000 Calibration (depending on your unit).

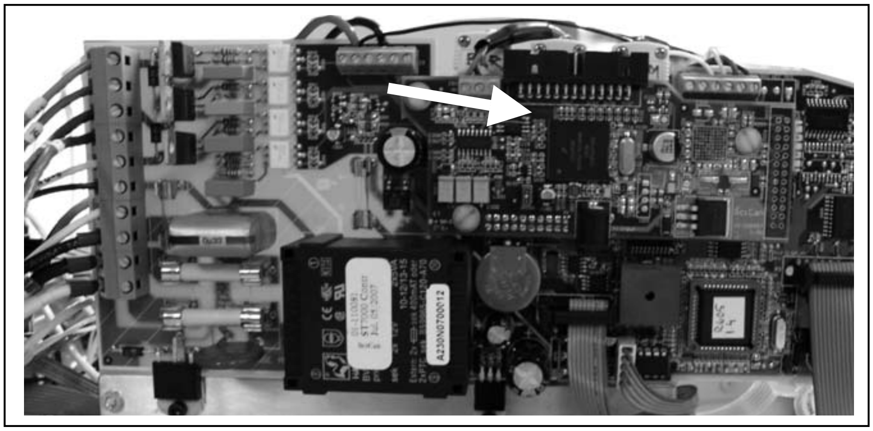


19. Adaptor Board

The adaptor board contains circuitry, which is static sensitive. Always wear a static strap when working with or near this board. Transport the adaptor board in a static protected bag.

Before installing a new adaptor board, inspect the shield assembly to ensure that the fish paper shield and the insulating standoffs are in place.

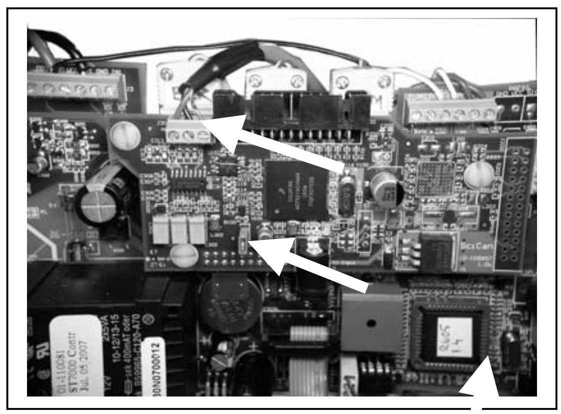
NOTE: Use extra caution. The thermocouple leads at the board end are very fragile.



To remove the Adaptor Board, follow these steps.

1. Power **OFF** the unit, unplug it and remove the cover. See chapter 5. Removing The Cover.

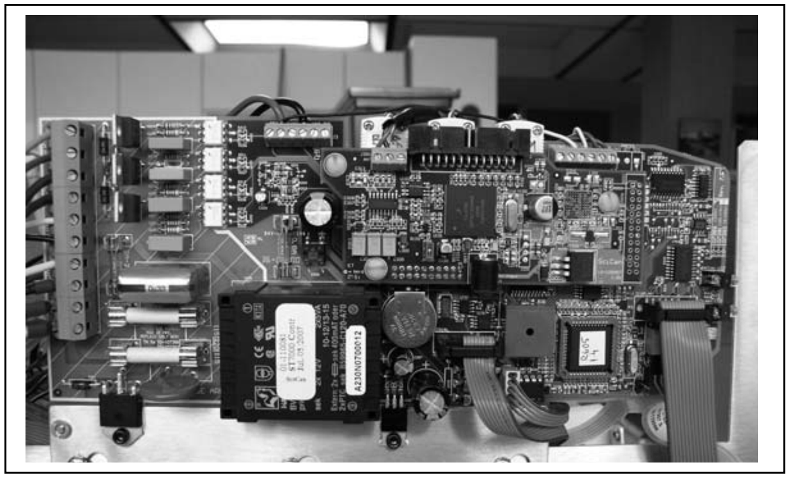
NOTE: The steam generator and auxiliary heater may be hot if the unit has been operating.



2. Disconnect the wires from the terminal block at the top of the Adaptor Board.
3. Remove the three plastic screws.
4. Slowly pull the adaptor board away and it will disengage the 20-pin connector that connects it to the controller board.
5. Reverse removal instructions to replace.



20. Controller Board



The controller board contains circuitry, which is static sensitive. Always wear a static strap when working with or near this board. Transport the controller board in a static protected bag.

Before installing a new controller board, inspect the shield assembly to ensure that the fish paper shield and the insulating standoffs are in place.

NOTE: Use extra caution. The thermocouple leads at the board end are very fragile.

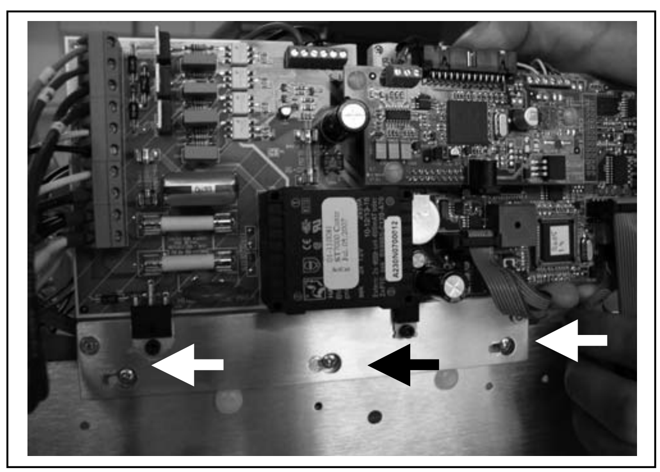
To remove the Controller Board Assembly, follow these steps:

1. Power **OFF** the unit, unplug it and remove the cover. See chapter 5. Removing The Cover.

   NOTE: The steam generator and auxiliary heater may be hot if the unit has been operating.
2. Remove the Adaptor Board. See chapter 19. Adaptor Board.
3. Disconnect all the wires from the Controller Board terminal block positions.
4. Disconnect all the connectors on the flag terminals.
5. Disconnect all ribbon cable connections.

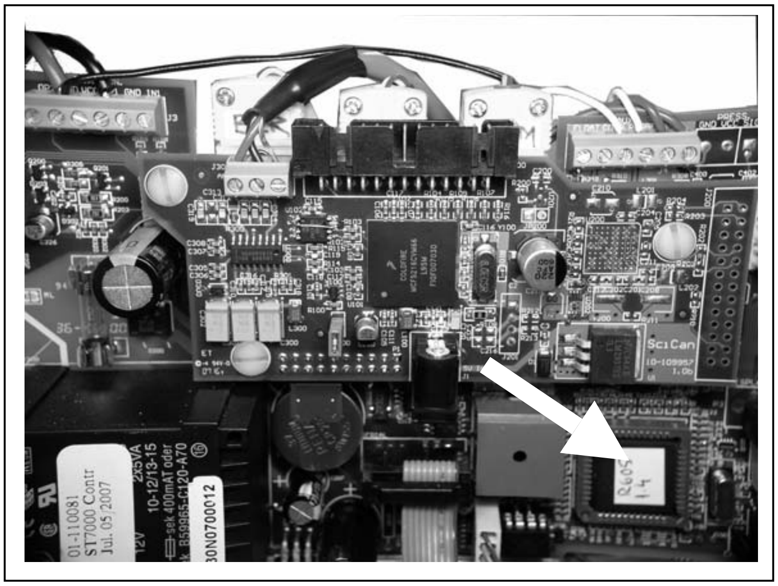
NOTE: Carefully bend all leads so they do not contact the Controller Board when it is removed.

6. Loosen the three screws holding controller board metal base to the chassis bracket and slide the board to the left to release screws through the cut-out keys.



Reverse removal instructions to replace. Must perform calibration after installing a new controller board. See chapter 29. Statim S-Class Calibration or chapter 30. Statim 7000 Calibration (depending on your unit).

21. Microprocessor



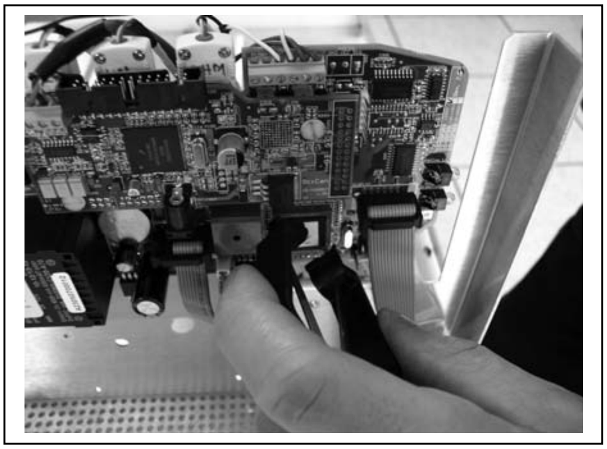
The microprocessor is static sensitive. Always wear a static strap when working with or near this component. Transport it in a static protected bag.

Note the orientation of pin 1 for the device and socket. Ensure that the device is fully inserted into the sockets.

To replace the microprocessor, perform the following steps:

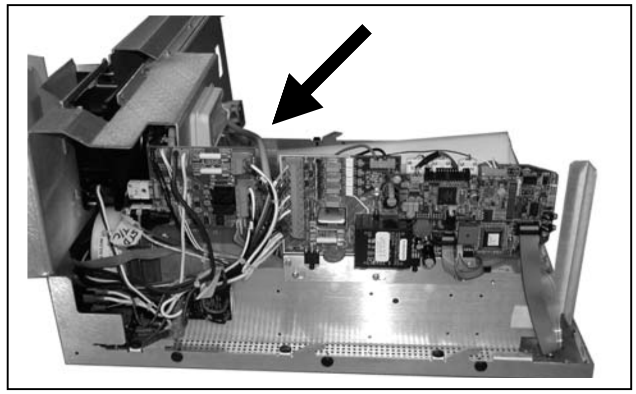
1. Power **OFF** the unit, unplug it and remove the cover. See chapter 5. Removing The Cover.
   NOTE: The steam generator and auxiliary heater may be hot if the unit has been operating
2. Using a chip puller, remove the microprocessor from controller board socket.





3. Discard the old microprocessor.
4. Install the new microprocessor.
5. After you install a new microprocessor calibrate the unit. See chapter 29. Statim S-Class Calibration or chapter 30. Statim 7000 Calibration (depending on your unit).
6. When you power the unit **ON**, verify that the version number of the microprocessor is briefly displayed. If the LCD fails to display the "select a cycle" message, review the wiring connector placement and check that the microprocessor is positioned properly in the sockets and that there are no damaged pins.

22. Auxiliary Heater Board



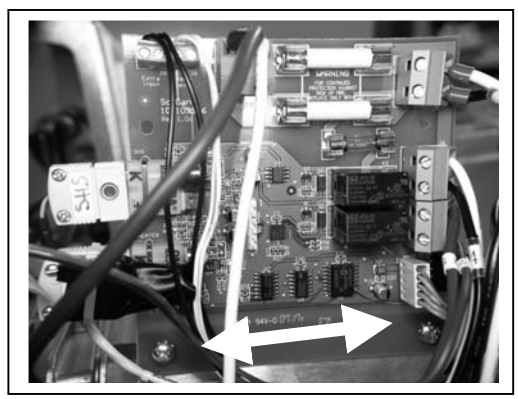
The auxiliary heater board contains circuitry, which is static sensitive. Always wear a static strap when working with or near this board. Transport the auxiliary heater board in a static protected bag.

Before installing a new auxiliary heater board, inspect the shield assembly to ensure that the fish paper shield and the insulating standoffs are in place.

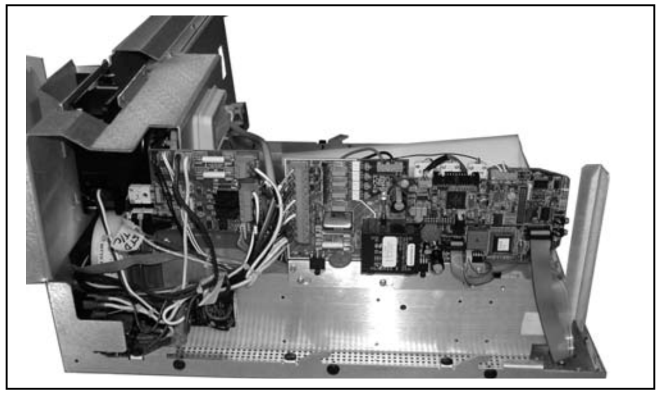
NOTE: Use extra caution. The thermocouple leads at the board end are very fragile.

To remove the Auxiliary Heater Board, follow these steps:

1. Power **OFF** the unit, unplug it and remove the cover. See chapter 5. Removing The Cover.
   NOTE: The steam generator and auxiliary heater may be hot if the unit has been operating.
2. Disconnect all the wires from the Auxiliary Heater Board terminal positions.
3. Disconnect all the connectors on the flag terminals.
4. Remove the two screws at bottom left and right of the board.
5. Remove the Auxiliary Heater Board.
6. Reverse removal instructions to replace.

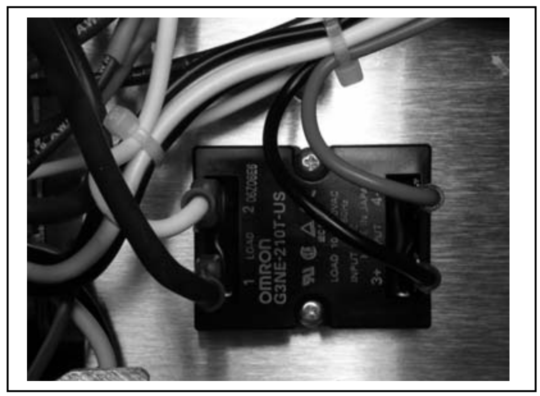


23. Solid State Relay



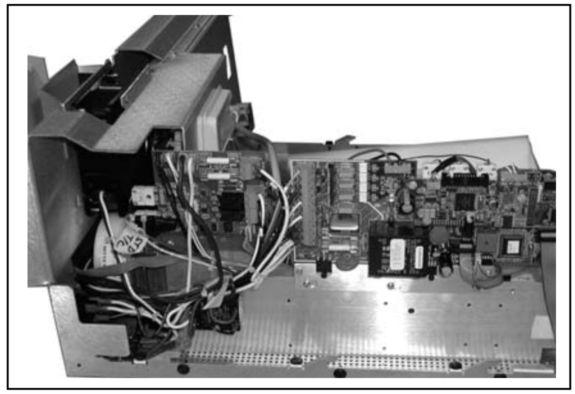
To remove the Solid State relay, follow these steps:

1. Power **OFF** the unit, unplug it and remove the cover. See chapter 5. Removing The Cover.
   NOTE: The steam generator and auxiliary heater may be hot if the unit has been operating.
2. Disconnect the four wires.
3. Unscrew top and bottom screws and remove.
4. Reverse removal instructions to replace.

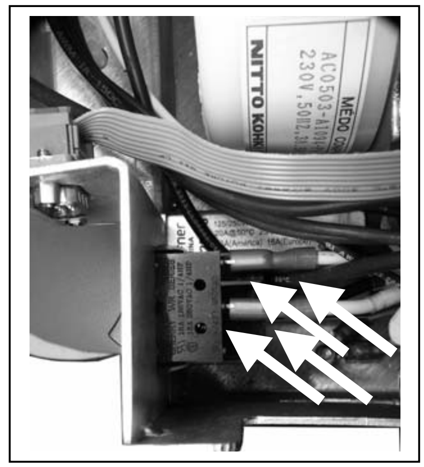


24. Mains Components

Power Switch



Hazardous voltages are accessible on the power cord, power cord receptacle, line filter, power switch, and power mains portion of the controller board when the power is **ON**. Disconnect the power cord before servicing the unit.

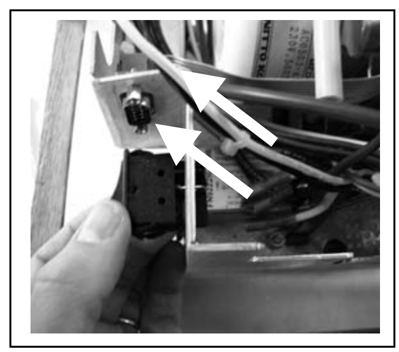


To remove the power switch, follow these steps:

1. Power **OFF** the unit, unplug it and remove the cover. See chapter 5. Removing The Cover.

   NOTE: The steam generator and auxiliary heater may be hot if the unit has been operating.

2. Remove the rear chassis cover plate. See chapter 6. Rear Chassis Cover Plate.
3. Disconnect the four wires from the power switch.
4. Push in the lock tabs on either side of switch and push the switch out through the opening in the chassis.
5. Reverse removal instructions to replace.



Line Filter

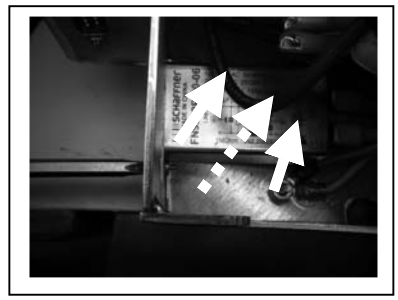
It is difficult to determine when a line filter has failed. If the unit blows mains fuses in the service panel, there may be a short in the line filter. Disconnect all leads from the mains input and output and test for shorted circuits.

To remove the line filter, perform the following steps:

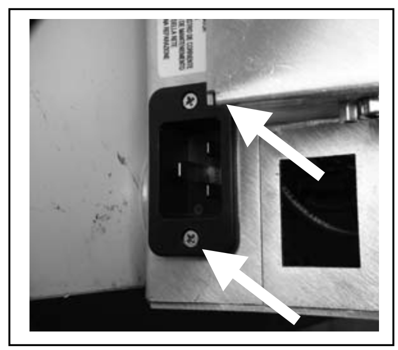
1. Power **OFF** the unit, unplug it and remove the cover. See chapter 5. Removing The Cover..

NOTE: The steam generator and auxiliary heater may be hot if the unit has been operating.

2. Remove the rear chassis cover plate. See chapter 6. Rear Chassis Cover Plate.

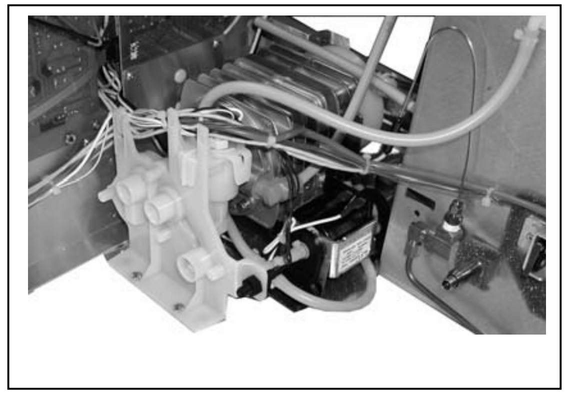


3. Disconnect the white wire from receptacle line filter position N, the black wire from line filter position P, and the green wire from line filter ground position.



4. Remove the screws that hold the filter to the chassis.
5. Remove the filter.
6. Reverse removal instructions to replace.
7. After you replace the line filter, you must perform a dielectric strength test (hi-pot) and a protective bonding impedance test (ground continuity) before you plug in the power cord.

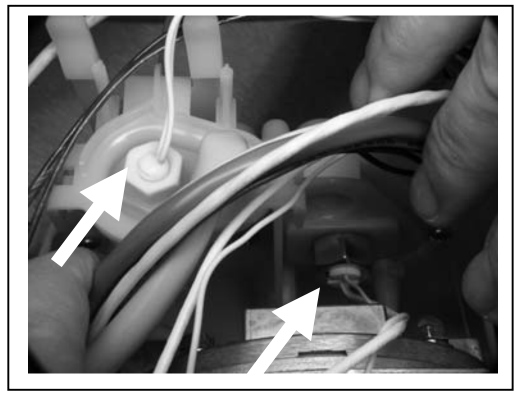
25. Reservoir Inlet Assembly



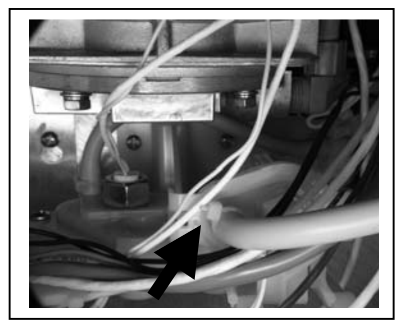
NOTE: this module includes the water quality sensor, the level sensor and the reservoir sensor.

To remove the reservoir inlet assembly, follow these steps:

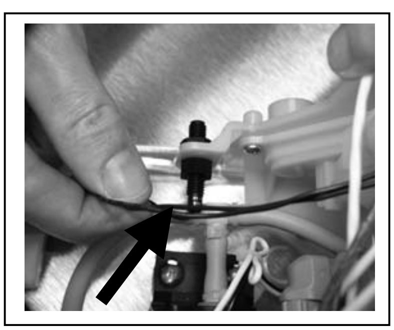
1. Power **OFF** the unit, unplug it and remove the cover. See chapter 5. Removing The Cover.
   NOTE: The steam generator and auxiliary heater may be hot if the unit has been operating.

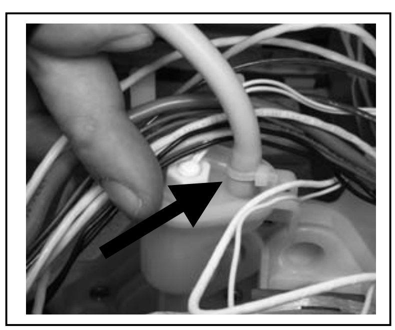


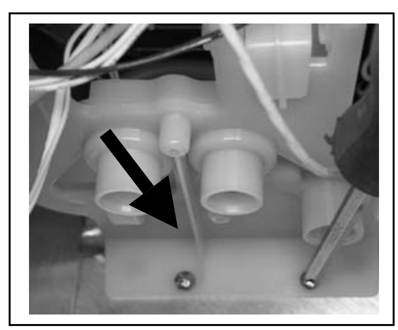
2. Disconnect the wires from the auxiliary PCB and main controller PCB.
   (2 white and 2 black wires go to the auxiliary. heater PCB and 2 white wires (one of these white wires being split into 1 black and 1 white) go to the main PCB).



3. Disconnect the 3 rubber tubes (there are 3 tubes - 2 at the back and 1 on the top).
4. Remove 4 screws from base.
5. Remove the Reservoir Inlet.
6. Reverse removal instructions to replace.

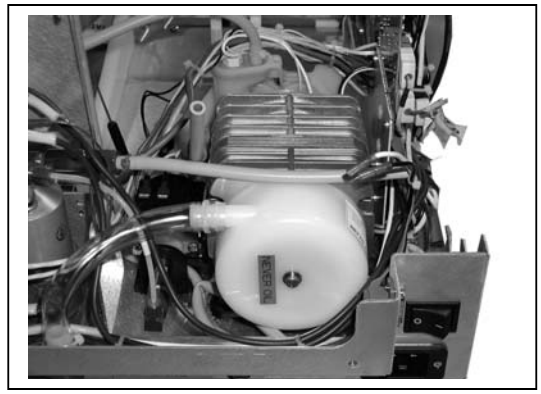




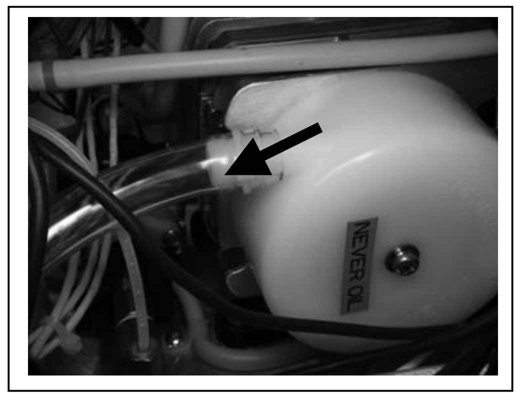


26. Compressor

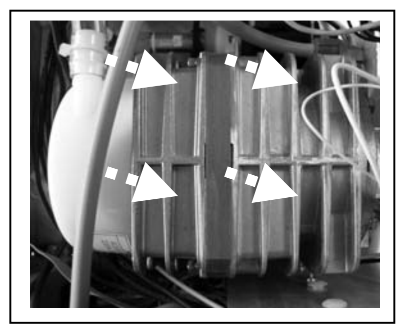
To remove the compressor, follow these steps:



1. Power OFF the unit, unplug it and remove the cover. See chapter 5. Removing The Cover.
2. NOTE: The steam generator and auxiliary heater may be hot if the unit has been operating.
3. Remove the rear chassis cover plate. See chapter 6. Rear Chassis Cover Plate.
4. Locate the transparent rubber tube that extends from the compressor intake fitting to the air fitting. Cut the cable tie securing the tube to the compressor and remove the tube from the fitting.

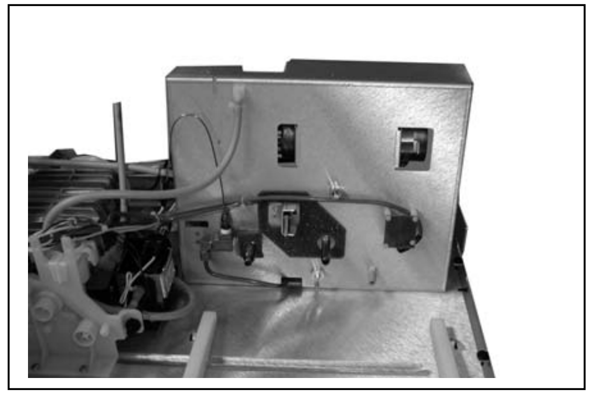


5. Remove the four screws that attach the compressor bracket to the chassis.
6. Disconnect the leads from Controller Board wires 9 and 10 NEUTRAL, and carefully cut the cable ties securing the compressor leads.
7. Disconnect the ground wire from the compressor body and remove the compressor from the unit.
8. Reverse removal instructions to replace.

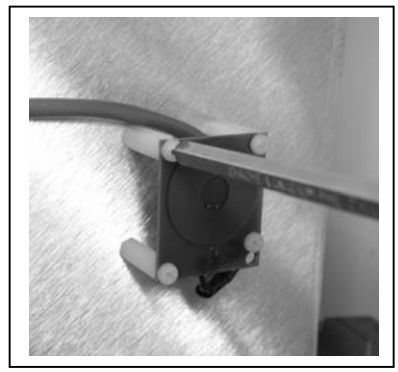


27. RFID Adaptor Module

To remove the RFID Adaptor Module, follow these steps:



1. Power OFF the unit, unplug it and remove the cover. See chapter 5. Removing The Cover.
   NOTE: The steam generator and auxiliary heater may be hot if the unit has been operating.
2. Remove the armature. See chapter 8. Armature.
3. Remove the four plastic stand-off screws holding the RFID adaptor to the rear chassis.
4. Disconnect the three RFID Adaptor Module wires from main controller board.
5. Reverse instruction to replace.



28. Conductivity Circuit Calibration Instructions

Statim 7000 equipped with PCB rev 7.x requires Conductivity Circuit Calibration

1. Power OFF the unit, unplug it and remove the cover. See chapter 5. Removing The Cover.
   NOTE: The steam generator and auxiliary heater may be hot if the unit has been operating.
2. Disconnect conductivity sensors wires
3. Using a wire, make a short on the FLOAT pins (J4-5 and J4-6)
4. Enter Service Mode by powering the unit up while holding Unwrapped and Wrapped button pressed. This **Service Mode** is password protected, enter password to continue (default password is: Unwrapped, Wrapped, R&P and Stop keys pressed in this order). The service technician can change this password. In case the changed password is lost a backdoor password can be used: Unwrapped, Wrapped, Unwrapped, Wrapped in this order.
5. Use Unwrapped Key to select next item in the menu or Wrapped Key to select previous item in the menu until Conductivity Setup is displayed.
6. Press Rubber and Plastic Key to enter Conductivity Setup selection.

Screen at this time:

CND=xx.xuS/NNN/y.yppm		
L=LL.L	H=HH.H	G=G.GG

Where:

xx.x	water conductivity in µS
NNN	conductivity measurement in ADC (Analog to Digital) counts (0…255)
y.y	water quality in ppm (parts per million)
HH.H	High value threshold (“Bad Water” limit), default 10µS. Readings larger than this trigger “Bad Water Quality” error.
LL.L	Low value threshold in µS, default 0.3µS. Do not adjust this value in Statim 7000 because this value is **not** used for triggering the “No Water, Refill reservoir” message. There is a float sensor for that.
G.GG	Water conductivity circuit Gain. Default 1.00

Note: Water produced by a good **SciCan Water Filter Cartridge** or distilled water readings should be below the High threshold.

7. Check/adjust the High threshold value to the default one. Do not touch the Low value threshold even though it is possible to adjust.
8. By pressing the Rubber and Plastic Key the selection moves between LO, HI and G
9. Select “G”, Water conductivity circuit Gain (flashing value on the display), by pressing Rubber and Plastic Key
10. Adjust G.GG value so that the conductivity in ADC counts (NNN) shows 186 ±1 count.
11. Press Stop key to exit Water conductivity mode and save *displayed* thresholds “HH.H”, “LL.L” and “G.GG” and enter normal mode of operation, “Select cycle” screen.

Note: **Keypad functions in Conductivity Setup screen**:

Unwrapped Key:	increment current field (the flashing value on the display)
Wrapped Key:	decrement current field (the flashing value on the display)
Rubber and Plastics:	move to next field
Stop key:	exit

STATIM 7000 Service Manual

29. Statim S-Class Calibration

Instructions for the Calibration of Statim 7000 S-Class Autoclave

Warning

- *Incorrect or inaccurate calibration may cause unsuccessful sterilization of instruments.*
- *Always recalibrate the thermocouples, the pressure transducer, the conductivity and the voltage reading after replacing a steam generator, probe bracket, pressure transducer, controller board, pressure interface board, or microprocessor / EEPROM. In addition, after the thermocouple is bent or reconnected to the controller board, recalibration is recommended.*
- Stat*im units contain electronic components that may be damaged or destroyed by electro-static discharge (ESD). Observe appropriate safeguards when calibrating.*
- *Always wear a static strap when working with or near printed circuit boards. In addition, use static footstraps, grounding mats and grounded work surfaces when calibrating.*
- *Make sure that there is sufficient water in the unit prior to starting calibration.*

The steam generator thermocouple doesn't require calibration. The chamber thermocouple and pressure transducer however must be calibrated to ensure the correct operation of the unit. Also the voltage and water conductivity readings must be calibrated. The voltage reading calibration is part of this instruction. See chapter 28 for conductivity calibration instructions.

The voltage reading is calibrated by adjusting the Voltage Offset by using the UNWRAPPED and WRAPPED keys (see instructions below) while comparing the voltage reading on the display with a the voltage measured by a reference voltmeter.

The chamber thermocouple is calibrated by adjusting the Chamber Thermocouple Offset using the UNWRAPPED and WRAPPED keys (see instructions below) while comparing a temperature on the display with a temperature measured by a reference thermometer.

The pressure transducer is calibrated by using the same UNWRAPPED and WRAPPED keys (see instructions below) to adjust the measured chamber pressure reading on the LCD to match the reference pressure meter attached to the cassette. The calibration is then verified by comparing the measured chamber temperature to the calculated chamber temperature and making a fine adjustment, if necessary.

To calibrate a Statim 7000 unit, follow these steps:

SETUP:

1. Turn the unit off and fill the water reservoir.
2. There is no need to remove the cover from the Statim in order to perform the calibration.
3. Insert a calibration cassette and connect the external temperature and pressure probe.

NOTE: Have a voltimeter available and ready to connect to the power outlet that the Statim is plugged into during the voltage calibration portion of the cycle.

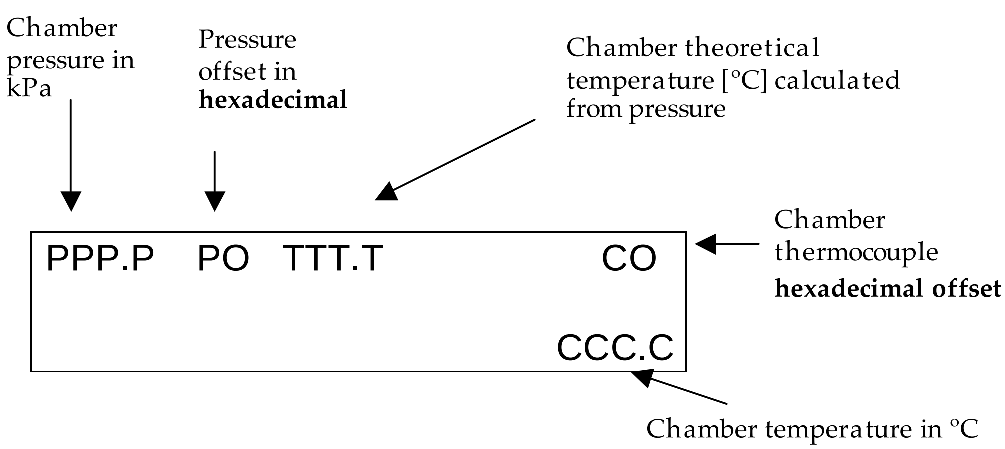
4. Power up unit while keeping Unwrapped and Wrapped button pressed to enter Statim **Service Mode**. This **Service Mode** is password protected, enter password to continue (default password is: Unwrapped, Wrapped, R&P and Stop keys pressed in this order). The service technician can change this password. In case the changed password is lost a backdoor password can be used: Unwrapped, Wrapped, Unwrapped, Wrapped in this order.

   Keypad functions at this time:

Unwrapped Key:	Select next item in the menu.
Wrapped Key:	Select previous item in the menu.
Rubber and Plastic Key:	Enter current selection

   Toggle using keypad through the menu selection to reach Calibration option and press R&P key.

5. Confirm that the display appears similar to the example above.



The value in the lower right-hand corner of the display (**CCC.C**) represents **Chamber** Temperature. The value in the upper left corner (**PPP.P**) is the Chamber **Pressure**. The following two digits in the upper left corner of the display (**PO**) represent the **Pressure** Sensor **Offset** value in hexadecimal followed by the theoretical chamber **Temperature** calculated from pressure (**TTT.T**). The two digits in the upper right corner of the display (**CO**) represent the **Chamber Offset** value in hexadecimal.

NOTE: I***n order to account for the temperature drift of the pressure sensor, the field PO has two functions:***

1. ***When chamber pressure is below 115kPa the offset will have one value POA – Pressure Offset Atmospheric.***
2. ***When chamber pressure is higher than 115kPa the PO field will switch to indicate the POS – Pressure Offset Sterilization.***

CHAMBER CALIBRATION:

(Voltage reading, Temperature and Pressure)

6. To start the calibration cycle press and release the Unwrapped cycle button and then press START button. The system will run a normal sterilization cycle, but the LCD will show the calibration display. The calibration cycle starts with the **pressure sensor calibration** (see screen below). This pressure offset adjustment has to be done within 30 seconds.

```
PPP.P   PO   TTT.T                TO

 Adjust Press!                 CCC.C
```

7. By using the Unwrapped key (+) and Wrapped Key (-) adjust pressure offset (at atmospheric pressure) until the internal sensor pressure reading (as displayed in the PPP.P field) matches the pressure reading on the external pressure meter within ±0.5Kpa. The PO field will show the new pressure offset, which in this case (pressure below 115kPa) represents **POA** (Pressure Offset Atmospheric).
8. After 30 seconds, the calibration cycle will continue by entering the heating up phase and the screen will change for the **Voltage Reading calibration** (see screen below):

```
Voltage Calibration
 V=VVV      VCAL=CCC
```

Screen Representation

VVV = Voltage measured by unit

CCC = Voltage calibration offset.

Keypad functions at this time

Unwrapped	Increase current field
Wrapped	Decrease current field
Rubber and Plastics	Select and return to main menu
Stop	Exit, without saving, to normal mode of operation

9. VCAL value should be adjusted so that the VVV value is the same as the line voltage measured by the reference voltmeter connected to the power line (same power outlet where Statim power cord is plugged in). Calibration should be done within ±2%.
10. This calibration phase lasts at least 30 seconds and it ends either by pressing the R&P button or automatically when the unit moves to the Conditioning phase. When the Voltage Reading calibration phase ends the screen moves to the main calibration screen, see below (see item 5 above for a description of this screen):

```
PPP.P   PO   TTT.T              TO

                              CCC.C
```

11. Allow the chamber to reach the sterilization temperature. As pressure builds in the chamber check for leaks in the cassette, associated piping and fittings. A steam leak in the system will introduce errors in the measurement and will result in improper calibration and non-sterile instruments.

Keypad functions at this time:

Unwrapped Key:	increment current selected offset (flashing offset)
Wrapped Key:	decrement current selected offset (flashing offset)
Rubber and Plastic Key:	select between PO and TO
Stop Key:	end chamber thermocouple calibration

12. During calibration the unit will run a normal cycle except the beginning of the holding phase (sterilization phase) when for ten consecutive times all the devices are turned off for approximately 10 seconds to facilitate the calibration process. During these periods the chamber temperature could go down to 131°C. After these ten “calm” periods the unit will resume normal operation (see the TIP below for checking the calibration during normal operation).
13. During these “calm” periods observe the chamber temperature as displayed on the reference thermometer and on the lower right side of the Statim LCD (CCC.C value). When the chamber temperature offset begins to flash, adjust the TO value by using the Unwrapped and Wrapped keys until the displayed temperatures match to within ± 0.2 °C. Please note that Chamber Temperature Offset TO flashes when it is allowed to be adjusted. If PO flashes press R&P key to select TO field. Adjust TO when the display shows:

```
PPP.P   PO   TTT.T              TO

 Adjust Temp!                 CCC.C
```

14. When chamber pressure is higher than 115kPa the PO field will switch to indicate the POS – Pressure Offset Sterilization. During the sterilization phase, after adjusting the temperature, press R&P key to select the PO field (PO field will be flashing) and using the keypad, adjust the pressure offset POS to match the external meter pressure indication within ±1 kPa.

NOTE: POS should not be more than 14 counts (7kPa) away in any direction from POA.

TIP: To make sure the calibration has been done correctly, look at the external meter. When it shows 136.5°C you should hear the valve clicking (the valve opens at 136.5°C).

15. Verify that for the rest of the calibration cycle the temperature and pressure readings (internal and external) are the same.
16. When the adjustment is complete, press the STOP button to end the chamber calibration cycle. If not the Calibration cycle will end automatically after 5 min of holding the temperature above 134°C. Press the Stop button again to reset the unit.

NOTE: If during recalibration POA is changed, the value of POS will be automatically reset to the new value of POA, therefore when chamber pressure is higher than 115kPa, POS has to be readjusted.

17. Power off the Statim.
18. In order to complete the calibration of the Statim 7000 the calibration of the Conductivity reading circuit has to be done next (if not already done). See chapter 28. Conductivity Circuit Calibration Instructions.

30. Statim 7000 Calibration

Instructions for the Calibration of Statim 7000 Cassette Autoclave

Warning

- ➔ *Incorrect or inaccurate calibration may cause unsuccessful sterilization of instruments.*
- ➔ *Statim units contain electronic components that may be damaged or destroyed by electro-static discharge (ESD). Observe appropriate safeguards when calibrating.*
- ➔ *Always wear a static strap when working with or near printed wiring boards. In addition, use static foot-straps, grounding mats and grounded work surfaces when calibrating.*
- ➔ *Make sure that there is sufficient water in the unit prior to starting calibration**. If a new SciCan Water Filter Cartridge is used select water priming option in the Technician menu.***

The chamber and validation thermocouples must be calibrated to ensure the correct operation of the Statim Autoclave. ***Always recalibrate the system thermocouples following a software upgrade, when the steam generator is serviced, when the P.C. board is replaced, or when either of the thermocouples is replaced. Pressure value is calculated from the calibrated validation thermocouple reading, no pressure calibration equipment is needed during the calibration procedure.***

The steam generator thermocouple doesn't require calibration. However, the Chamber and Validation thermocouples must be calibrated to ensure the correct operation of the unit. Also the voltage and water conductivity readings must be calibrated. The voltage reading calibration is part of this instruction. See chapter 28 for conductivity calibration instructions.

Validation thermocouple calibration is done automatically by running a special calibration cycle.

The chamber thermocouple is calibrated by adjusting the Chamber Thermocouple Offset using the Unwrapped and Wrapped keys while comparing a temperature on the display with a temperature measured by a reference thermometer.

To calibrate a Statim 7000 unit, follow these steps:

<u>SETUP:</u>

1. Turn the unit off and fill the reservoir with water.

2. There is no need to remove the cover from the Statim 7000 in order to perform the calibration.

3. Install a calibration cassette with the reference thermocouple inserted into the hole in the front of the chamber.

Have a voltimeter available and ready to connect to the power outlet that the Statim is plugged into during the voltage calibration of the cycle.

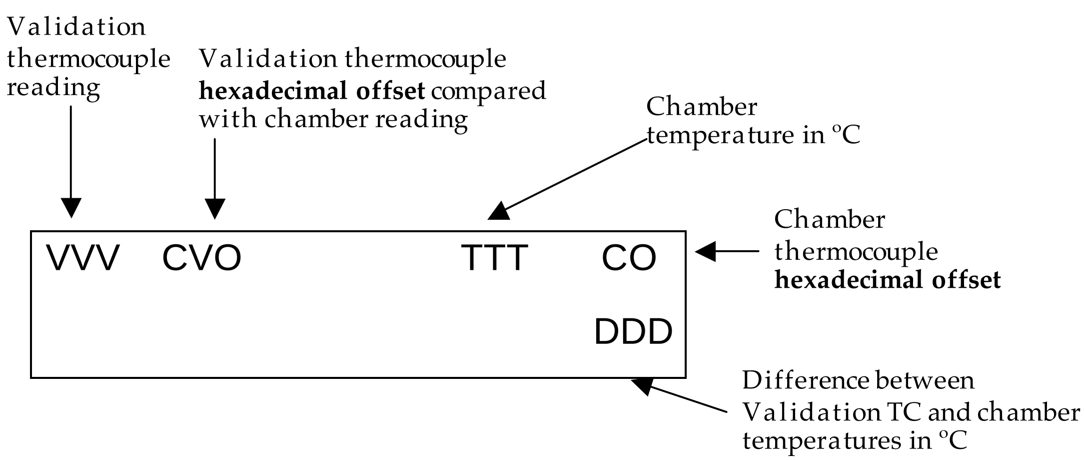
4. Power up unit while keeping Unwrapped and Wrapped button pressed to enter Statim **Service Mode**. This **Service Mode** is password protected, enter password to continue (default password is: Unwrapped, Wrapped, R&P and Stop keys pressed in this order). The service technician can change this password. In case the changed password is lost a backdoor password can be used: Unwrapped, Wrapped, Unwrapped, Wrapped in this order.

   Keypad functions at this time:

Unwrapped Key:	Select next item in the menu.
Wrapped Key:	Select previous item in the menu.
Rubber and Plastic Key:	Enter current selection

   Toggle using keypad through the menu selection to reach Calibration option and press R&P key.

5. Confirm that the display appears similar to the example above.



CHAMBER CALIBRATION:
(Voltage reading and Chamber thermocouple)

6. Press the Unwrapped cycle button (first from the left) and after that press START button to activate a chamber thermocouple calibration cycle. The calibration cycle will start by entering the heating up phase and the screen will change for the **Voltage Reading calibration** (see screen below):

```
Voltage Calibration
 V=VVV       VCAL=CCC
```

Screen Representation

VVV = Voltage measured by unit
CCC = Voltage calibration offset.

Keypad functions at this time

Unwrapped	Increase current field
Wrapped	Decrease current field
Rubber and Plastics	Select and return to main menu
Stop	Exit, without saving, to normal mode of operation

7. VCAL value should be adjusted so that the VVV value is the same as the line voltage measured by the reference voltmeter connected to the power line (same power outlet where Statim power cord is plugged in). Calibration should be done within ±2%.

8. This calibration phase lasts at least 30 seconds and it ends either by pressing the R&P button or automatically when the unit moves to the Conditioning phase. When the Voltage Reading calibration phase ends the screen moves to the main calibration screen, see below (see item 5 above for a description of this screen):
   Note: No "∗" will appear in the Chamber thermocouple calibration screen as it does for the Validation Thermocouple calibration

```
VVV   CVO              TTT     CO
                               DDD
```

9. Wait for the chamber to reach the sterilization temperature of 134°C.

   Keypad functions at this time:
   Unwrapped Key: increment current selected offset (flashing offset)
   Wrapped Key: decrement current selected offset (flashing offset)
   Stop Key: end chamber thermocouple calibration

10. Observe the chamber temperature as displayed on the reference thermometer and on the upper right of the Statim LCD (TTT value). When the chamber temperature offset begins to flash, adjust the CO value by using the Unwrapped and Wrapped keys until the displayed temperatures match to within ±0.2°C. (Please note that the Chamber Temperature Offset (CO) will flash when it is allowed to be adjusted.)
11. When the adjustment is complete, press the STOP button to end the chamber thermocouple calibration cycle.
12. Move to the Validation Thermocouple calibration procedure.

Validation Thermocouple Calibration:
(Voltage reading and Chamber thermocouple)

13. Turn the machine off and back on, while keeping Unwrapped and Wrapped button pressed to go back to **Service Mode**. Enter password to continue. Toggle using keypad through the menu selection to reach Calibration option and press R&P key. The display should show the calibration screen.
14. Check that there is sufficient water in the water reservoir before proceeding.
15. Start a Validation Thermocouple self-calibration cycle. To do this, press and **hold** the UNWRAPPED button and in the same time press START button.
16. The calibration cycle will start by entering the heating up phase and the screen will change for the **Voltage Reading calibration** (see screen below):

```
Voltage Calibration
 V=VVV      VCAL=CCC
```

Screen Representation

VVV = Voltage measured by unit
CCC = Voltage calibration offset.

Keypad functions at this time

Unwrapped	Increase current field
Wrapped	Decrease current field
Rubber and Plastics	Select and return to main menu
Stop	Exit, without saving, to normal mode of operation

17. VCAL value should be adjusted so that the VVV value is the same as the line voltage measured by the reference voltmeter connected to the power line (same power outlet where Statim power cord is plugged in). Calibration should be done within ±2%.

18. This calibration phase lasts at least 30 seconds and it ends either by pressing the R&P button or automatically when the unit moves to the Conditioning phase. When the Voltage Reading calibration phase ends the screen moves to the main calibration screen, see below (see item 5 above for a description of this screen):
    Note: The character "*" will appear immediately to the right of the Validation thermocouple hexadecimal offset on the display to indicate that a Validation thermocouple calibration cycle is running. This calibration will take approximately 6 minutes.

VVV	CVO*	TTT	CO
			DDD

19. Allow the Validation thermocouple self-calibration to complete. The temperature within the chamber will rise to the sterilization temperature. Wait until sterilization phase of the calibration cycle ends automatically. The offset value in the upper left-hand corner of the display (CVO) may have changed to a new offset value.

20. Press the STOP button to end the Validation TC self-calibration cycle.

21. Power off the Statim.

22. In order to complete the calibration of the Statim 7000 the calibration of the Conductivity reading circuit has to be done next (if not already done). See chapter 28. Conductivity Circuit Calibration Instructions.

31. Service PCB Set-Up

Service setup mode – To enter the **Service Setup Mode**, turn power switch ON while holding down Unwrapped and Wrapped buttons.
The **Service Setup Mode** is password protected, a password must be entered to continue. The default password is, Unwrapped, Wrapped, Rubber and Plastics, Stop buttons pressed in this order. If the password has been changed the backdoor password is, Unwrapped, Wrapped, Unwrapped, Wrapped buttons pressed in this order.

```
>Calibration
Time/Date Setup
```

Language Setup
Unit ID Setup
Set cycle counter
Conductivity Setup
Water.Cnd Tmp. Comp
Last Printout
Stored CF Printouts
Clear CF Printouts
Display last CF#
Devices Test On/Off
Temperature Offset
Validation Offset
Repeater mode
RS232
End of Line CR/LF
Serial Port Bitrate
Printer user º char
Factory default
Drying – Unwrapped
Drying – Wrapped
Drying – R&P
Drying - Extra
Air Filter Warning
Water Filter
Replace Filter
Steri. End buzzer
Upgrade Firmware
Change Password
Backup NVRAM
Restore NVRAM
Save and Exit
Exit
Production Cycle

Keypad:

Unwrapped	Select next item in the menu
Wrapped	Select previous item in the menu
Rubber and Plastics	Enter the indicated sub menu selection
Stop	Exit menu to normal mode of operation

Calibration – Select calibration to run chamber and validation thermocouple calibration cycles only.

Time/Date Setup Mode – Set the proper time and date

18:00 HH:MM	04/10/2008 MM/DD/YYYY

Keypad:

Unwrapped	Increase current field (the flashing value on the display)
Wrapped	Decrease current field (the flashing value on the display)
Rubber and Plastics	Select next field
Stop	Save & exit menu to normal mode of operation

Language Setup – Display information in your desired language

N. A. ENGLISH

Available Languages
N. A. English (North American English)
U. K. English (United Kingdom English)
Francais (French)
Deutsch (German)
Espanol (Spanish)
Italiano (Italian)
Dansk (Danish)
Portugues
Nederlands
Japanese
Svenska (Swedish)
Polski (Polish)
Magyar (Hungarian)
Cesky (Czech)
Norsk (Norwegian)
Islenska (Iceland)
Slovencina (Slovak)
Eesti (Estonian)
Lietuviu K. (Lativan)
Slovenian (Slovenia)
Romana (Romanian)

Keypad:

Unwrapped	Select next language
Wrapped	Select previous language

Rubber and Plastics	If Repeater mode is ON, this key will scroll through all the available display messages of the chosen language.
Stop	Save & exit menu to normal mode of operation

Unit ID Setup – Associate unit with an ID number

```
Unit   #     :
000
```

Keypad:

Unwrapped	Decrease current field (the flashing value on the display)
Wrapped	Increase current field (the flashing value on the display)
Rubber and Plastics	Select next digit
Stop	Save & exit menu to normal mode of operation

Set cycle counter – Adjust the recorded number of cycles ran

```
Cycle Number
000000
```

Keypad:

Unwrapped	Decrease current digit
Wrapped	Increase current digit
Rubber and Plastics	Select next digit
Stop	Save & exit menu to normal mode of operation

Conductivity Setup – To display detected water quality and adjust low and high thresholds.

```
CD= x.xuS/NNN/y.yppm
L   R     H=HH.H   G=G.GG
```

Screen Representation

x.x	Water conductivity in uS (micro-Siemens)
NNN	Water conductivity in ADC (Analog to Digital converter) counts (0…255)
y.y	Water quality in ppm (parts per million)
L	"L" is displayed when water level switch is activated, "-" when the switch is not active
R	"R" is displayed when water reservoir reed switch is activated, "-" when the water reservoir reed switch is not activated.
HH.H	High value threshold (Bad water threshold) default 10uS Values larger than this trigger "Bad water quality" error
G.GG	Water conductivity circuit gain default 1.00

Note: Statim 7000 does not use the conductivity reading to trigger the "No Water, Refill Reservoir" message. There is a float sensor for that.

Keypad:

Unwrapped	Increase current field
Wrapped	Decrease current field
Rubber and Plastics	Move to next field
Stop	Exit menu to normal mode of operation

Water Cnd Tmp Comp - To enable or disable water conductivity temperature compensation

```
>Water Cnd Tmp Comp
On
```

Off

Keypad:

Unwrapped	Select next option. Second line shows the new value or selection.
Wrapped	Select previous option. Second line shows the new value or selection.
Rubber and Plastics	Select and return to main menu
Stop	Exit, without saving, to normal mode of operation

For optimum performance the Water Cnd. Tmp Comp should be on.

Last Printout – Printer reprints last cycle and unit returns to normal mode of operation

Stored CF Printouts – Printer prints saved cycle fault printouts and unit returns to normal mode of operation.

The saved CF printouts are sent to the printer or data logger only when either one is attached and configured. The following types of errors are saved:

CF's
Water quality or Water level low errors
Cycle interrupted due to errors (##)

Clear CF Printouts – Reset Cycle Fault printout list

```
>Clear CF Printouts
No
```

Yes

Keypad:

Unwrapped	Select next option Second line shows the new value or selection.
Wrapped	Select previous option. Second line shows the new value or selection.
Rubber and Plastics	Select and return to main menu

Stop	Exit, without saving, to normal mode of operation

Display last CF# - Show the last Cycle Fault that occurred

```
>Display last CF#
 ##    (######)
```

Screen Representation

##	Value of last recorded CF
(######)	Cycle counter for last CF

Keypad:

Rubber and Plastics	Return to main menu
Stop	Exit to normal mode of operation

Devices Test On/Off – Toggle the units devices on or off

```
>Devices Test On/Off
 Pump Off
```

Valve Off
Compressor Off
Yellow LED Off
Extra 1L Off (currently not used)
Extra 2L Off (currently not used)
Valve 2 Off
Fan Off

Keypad:

Unwrapped	Select next option. Second line shows the new value or selection.
Wrapped	Select previous option. Second line shows the new value or selection.
Rubber and Plastics	Toggle On/Off selected device
Stop	Return to main menu

Chamber Temperature Offset – View the offset of the chamber thermocouple

```
>Temperature Offset
 ##
```

Screen Representation

##	Offset value

Keypad:

Rubber and Plastics	Return to main menu
Stop	Exit to normal mode of operation

Validation Offset – View the offset of the validation thermocouple

```
>Validation Offset
 ##
```

Screen Representation

##	Offset value

Keypad:

Rubber and Plastics	Return to main menu
Stop	Exit to normal mode of operation

Repeater mode – Enable or disable unit to run cycles continuously

```
>Repeater mode
Off
```

On

Keypad:

Unwrapped	Select next option. Second line shows new value or selection.
Wrapped	Select previous option. Second line shows new value or selection.
Rubber and Plastics	Select and return to main menu
Stop	Exit, without saving, to normal mode of operation

RS232 – To select which serial device to attach

```
>RS232
  N/A
```

Serial Printer
USB FLASH/MSD

Keypad:

Unwrapped	Move to next option, second line shows the new value or selection.
Wrapped	Move to previous option, second line shows the new value or selection.
Rubber and Plastics	Save and return to main menu
Stop	Exit menu to normal mode of operation without saving

End of Line CR/LF – Configure the printout layout

```
>End Of Line CR/LF
CR/LF
```

-
CR
This only needs to be set if a serial printer is attached to the serial port.

Available options:

- No line terminator is sent after each line. To be used with printer that accepts only 20 characters per line and automatically advances to next line. **Should be used with the STATprinter.**

CR A <CR> is sent at the end of the line. To be used with printers that advance to beginning of next line when a CR is received.

CR/LF A <CR><LF> is sent at the end of the line. To be used with printers that translate advance to beginning of next line only when LF is received.

Keypad:

Unwrapped	Select next option. Second line shows the new value or selection.
Wrapped	Select previous option. Second line shows the new value or selection.
Rubber and Plastics	Save & exit to main menu
Stop	Exit and return to normal mode of operation

SciCan Suggested External Printers	End Of Line CR/LF	Serial Port Bit Rate	Printer user ° char
Epson TM-U220D (C31C515603)	CR/LF	9600	248 [0xF8]
Citizen IDP-3110-40 RF 120B	CR	9600	N/A
Star Micro SP212FD42-120	CR	9600	210 [0xd2]
Star Micro SP216FD41-120	CR/LF	9600	210 [0xd2]
Star Micro SP512MD42-R	CR/LF	9600	210 [0xd2]

Serial Port Bit Rate – Choose bit rate for device connected to the serial port

```
Serial Port Bit Rate
9600
```

19200
57600
115200
1200
2400
4800

If USB FLASH/MSD is selected as the RS232 device, a Serial Port Bit Rate selection of 9600 will be required for the Data Logger to be operational.

Keypad:

Unwrapped	Select next value
Wrapped	Select previous value
Rubber and Plastics	Save & return to main menu
Stop	Exit, without saving, and return to normal mode of operation

Printer user ° char – Setting to print a °C sign

```
Printer user ° char
dd  [0xhh]
```

dd decimal value for selected char-default 32
hh hex value for the selected char-default 20

Keypad:

Unwrapped	Increase value by one
Wrapped	Increase value by ten
Rubber and Plastics	Select and return to main menu
Stop	Exit, without saving, and return to normal mode of operation

Factory default – Reset to factory default settings

```
>Factory default
No
```

Yes, Reset NVRAM !

This function resets the NVRAM to factory default settings. The chamber and voltage calibration offsets and conductivity settings will be reset. The cycle counter will not be reset.

Keypad:

Unwrapped	Select next option. Second line shows the new value
Wrapped	Select previous option. Second line shows the new value
Rubber and Plastics	Save and return to main menu
Stop	Exit, without saving, and return to normal mode of operation

Drying – Unwrapped – Set Unwrapped Cycle drying time between 0 & 30 minutes

```
>Drying - Unwrapped
Time:  12  minutes
```

Keypad:

Unwrapped	Increase time by one minute
Wrapped	Decrease time by one minute
Rubber and Plastics	Save and return to main menu
Stop	Save & exit menu to normal mode of operation

Drying – Wrapped – Set Wrapped Cycle drying time between 10 & 30 minutes

```
>Drying - Wrapped
Time:  12  minutes
```

Keypad:

Unwrapped	Increase time by one minute

Wrapped	Decrease time by one minute
Rubber and Plastics	Save and return to main menu
Stop	Save & exit menu to normal mode of operation

<u>Drying – R&P</u> – Set Rubber & Plastics Cycle drying time between 0 & 30 minutes

```
>Drying – R&P
Time:  12  minutes
```

<u>Keypad:</u>

Unwrapped	Increase time by one minute
Wrapped	Decrease time by one minute
Rubber and Plastics	Save and return to main menu
Stop	Save & exit menu to normal mode of operation

<u>Drying – Extra</u> – Sets drying time between 1 & 30 minutes for Air Dryer Only Cycle

```
>Drying – Extra
Time:  12  minutes
```

<u>Keypad:</u>

Unwrapped	Increase time by one minute
Wrapped	Decrease time by one minute
Rubber and Plastics	Save and return to main menu
Stop	Save & exit menu to normal mode of operation

<u>Air Filter Warning</u> – Reset warning indicator when Air Filter is replaced.

```
>Air Filter Warning
Do not Reset
```

Yes, Reset

<u>Water Filter</u> – Set Statim for Water Filter or Water Bypass Cartridge

```
>Water Filter
Installed
```

Not Installed

<u>Replace Filter</u> – Reset Statim when Water Filter is replaced.

```
>Replace Filter
    Do not replace
```

Yes, replace

Steri. End buzzer – Set length of time buzzer will sound a end of sterilization

```
>Steri. End buzzer
0s
```

15s
30s
Max

Upgrade Firmware – Not used at this time.

Change Password – Change the password required to access the service menu

The unit will query for a 4 key password

```
Type New Password
****
```

The unit will require that the user re-enter the same 4 key password

```
Type New Password
****
```

The unit will confirm that the password has been changed or if changing the password failed, the unit will again query for a new 4 key password

```
Password Changed
```

In case the changed password is lost a backdoor password can be used: Unwrapped, Wrapped, Unwrapped, Wrapped in this order.

Backup NVRAM – Saves a copy of the unit's current settings

```
>Backup NVRAM
No
```

Yes

Keypad:

Unwrapped	Select next option Second line shows the new value or selection.
Wrapped	Select previous option. Second line shows the new value or selection.
Rubber and Plastics	Select and return to main menu
Stop	Exit, without saving, to normal mode of operation

Restore NVRAM – Restores the previously saved unit settings into the NVRAM

```
>Restore NVRAM
No
```

Yes

Keypad:

Unwrapped	Select next option Second line shows the new value or selection.
Wrapped	Select previous option. Second line shows the new value
Rubber and Plastics	Select and return to main menu
Stop	Exit, without saving, to normal mode of operation

Save and Exit – Saving settings and return to normal mode of operation
Upon selection, current settings are saved and unit restarts in normal mode of operation

Exit – Exit menu without saving settings
Upon selection, current settings are discarded, not saved and unit restarts in normal mode of operation

Production Cycle – For manufacturing use only

32. User PCB Setup

User setup mode – To initially setup your Statim

Hold down the Stop button and turn the unit ON.

If unit is already ON.

Hold down the Stop Button and the Air Dry Only Button simultaneously.

Initial Display

>Time/Date Setup
Language Setup

Unit ID Setup
Drying – Unwrapped
Drying – Wrapped
Drying – R&P
Drying - Extra
Water Quality
Last Printout
RS232
End of Line CR/LF
Serial Port Bit rate
Printer user º char
Steri. End buzzer
Air Filter Warning
Water Filter
Replace Filter
Save and Exit
Exit

Keypad:

Unwrapped	Select next item in the menu
Wrapped	Select previous item in the menu
Rubber and Plastics	Enter the indicated sub menu selection
Stop	Exit menu to normal mode of operation

Time/Date Setup Mode – Set the proper time and date

18:00	04/10/2008
HH:MM	MM/DD/YYYY

Keypad:

Unwrapped	Increase current field (the flashing value on the display)
Wrapped	Decrease current field (the flashing value on the display)
Rubber and Plastics	Select next field
Stop	Save & exit menu to normal mode of operation

Language Setup – Display information in your desired language

N. A. ENGLISH

Available Languages
N. A. English (North American English)
U. K. English (United Kingdom English)
Francais (French)
Deutsch (German)
Espanol (Spanish)
Italiano (Italian)
Dansk (Danish)
Portugues
Nederlands
Japanese
Svenska (Swedish)
Polski (Polish)
Magyar (Hungarian)
Cesky (Czech)
Norsk (Norwegian)
Islenska (Iceland)
Slovencina (Slovak)
Eesti (Estonian)
Lietuviu K. (Lativan)
Slovenian (Slovenia)
Romana (Romanian)

Keypad:

Unwrapped	Select next language
Wrapped	Select previous language
Stop	Save & exit menu to normal mode of operation

Unit ID Setup – Associate unit with an ID number

Unit # : 000

Keypad:

Unwrapped	Decrease current field (the flashing value on the display)
Wrapped	Increase current field (the flashing value on the display)
Rubber and Plastics	Select next digit
Stop	Save & exit menu to normal mode of operation

Drying – Unwrapped – Set Unwrapped Cycle drying time between 0 & 30 minutes

```
>Drying - Unwrapped
Time:  12  minutes
```

Keypad:

Unwrapped	Increase time by one minute
Wrapped	Decrease time by one minute
Rubber and Plastics	Save and return to main menu
Stop	Save & exit menu to normal mode of operation

Drying – Wrapped – Set Wrapped Cycle drying time between 10 & 30 minutes

```
>Drying - Wrapped
Time:  12  minutes
```

Keypad:

Unwrapped	Increase time by one minute
Wrapped	Decrease time by one minute
Rubber and Plastics	Save and return to main menu
Stop	Save & exit menu to normal mode of operation

Drying – R&P – Set Rubber & Plastics Cycle drying time between 0 & 30 minutes

```
>Drying – R&P
Time:  12  minutes
```

Keypad:

Unwrapped	Increase time by one minute
Wrapped	Decrease time by one minute
Rubber and Plastics	Save and return to main menu
Stop	Save & exit menu to normal mode of operation

Drying – Extra – Sets drying time between 1 & 30 minutes for Air Dryer Only Cycle

```
>Drying – Extra
Time:  12  minutes
```

Keypad:

Unwrapped	Increase time by one minute
Wrapped	Decrease time by one minute
Rubber and Plastics	Save and return to main menu
Stop	Save & exit menu to normal mode of operation

Water Quality – Display detected water quality

```
>Water quality
CD= x.xuS/NNN/y.yppm
```

Screen Representation

x.x	Water conductivity in uS (micro-Siemens)
NNN	Water conductivity in ADC (Analog to Digital converter) counts (0…255)
y.y	Water quality in ppm (parts per million)

Keypad:

Rubber and Plastics	Return to main menu
Stop	Exit menu to normal mode of operation

Last Printout – Printer reprints last cycle and unit returns to normal mode of operation

RS232 – To select which serial device to attach

```
>RS232
 N/A
```

Serial Printer
USB FLASH/MSD

Keypad:

Unwrapped	Move to next option, second line shows the new value or selection.
Wrapped	Move to previous option, second line shows the new value or selection.
Rubber and Plastics	Save and return to main menu
Stop	Exit menu to normal mode of operation without saving

End of Line CR/LF – Configure the printout layout

```
>End Of Line CR/LF
CR/LF
```

-
CR
This only needs to be set if a serial printer is attached to the serial port.

Available options:

-	No line terminator is sent after each line. To be used with printer that accepts only 20 characters per line and automatically advances to next line. **Should be used with the STATprinter.**
CR	A <CR> is sent at the end of the line. To be used with printers that advance to beginning of next line when a CR is received.

CR/LF A <CR><LF> is sent at the end of the line. To be used with printers that translate advance to beginning of next line only when LF is received.

Keypad:

Unwrapped Select next option. Second line shows the new value or selection.
Wrapped Select previous option. Second line shows the new value or selection.
Rubber and Plastics Save & exit to main menu
Stop Exit and return to normal mode of operation

SciCan Suggested External Printers	End Of Line CR/LF	Serial Port Bit Rate	Printer user ° char
Epson TM-U220D C31C515603)	CR/LF	9600	248 [0xF8]
Citizen IDP-3110-40 RF 120B	CR	9600	N/A
Star Micro SP212FD42-120	CR	9600	210 [0xd2]
Star Micro SP216FD41-120	CR/LF	9600	210 [0xd2]
Star Micro SP512MD42-R	CR/LF	9600	210 [0xd2]

Serial Port Bit Rate – Choose bit rate for device connected to the serial port

Serial Port Bit Rate 9600

19200
57600
115200
1200
2400
4800

If USB FLASH/MSD is selected as the RS232 device, a Serial Port Bit Rate selection of 9600 will be required for the Data Logger to be operational.

Keypad:

Unwrapped Select next value
Wrapped Select previous value
Rubber and Plastics Save & Return to main menu
Stop Exit without saving and return to normal mode of operation

Printer user ° char – Setting to print a °C sign

Printer user ° char 32 [0x20]

32	decimal value for selected char-default 32
20	hex value for the selected char-default 20

Keypad:

Unwrapped	Increase value by one
Wrapped	Increase value by ten
Rubber and Plastics	Select and return to main menu
Stop	Exit without saving and return to normal mode of operation

Steri. End buzzer – Set length of time buzzer will sound a end of sterilization

```
>Steri. End buzzer
0s
```

15s
30s
Max

Keypad:

Unwrapped	Select next value
Wrapped	Select previous value
Rubber and Plastics	Save & Return to main menu
Stop	Save & exit menu to normal mode of operation

Air Filter Warning – Reset warning indicator when Air Filter is replaced.

```
>Air Filter Warning
Do not Reset
```

Yes, Reset

Water Filter – Set Statim for Water Filter or Water Bypass Cartridge

```
>Water Filter
Installed
```

Not Installed

Replace Filter – Reset Statim when Water Filter is replaced.

```
>Replace Filter
    Do not replace
```

Yes, replace

Save and Exit – Saving settings and return to normal mode of operation
Upon selection, current settings are saved and unit restarts in normal mode of operation

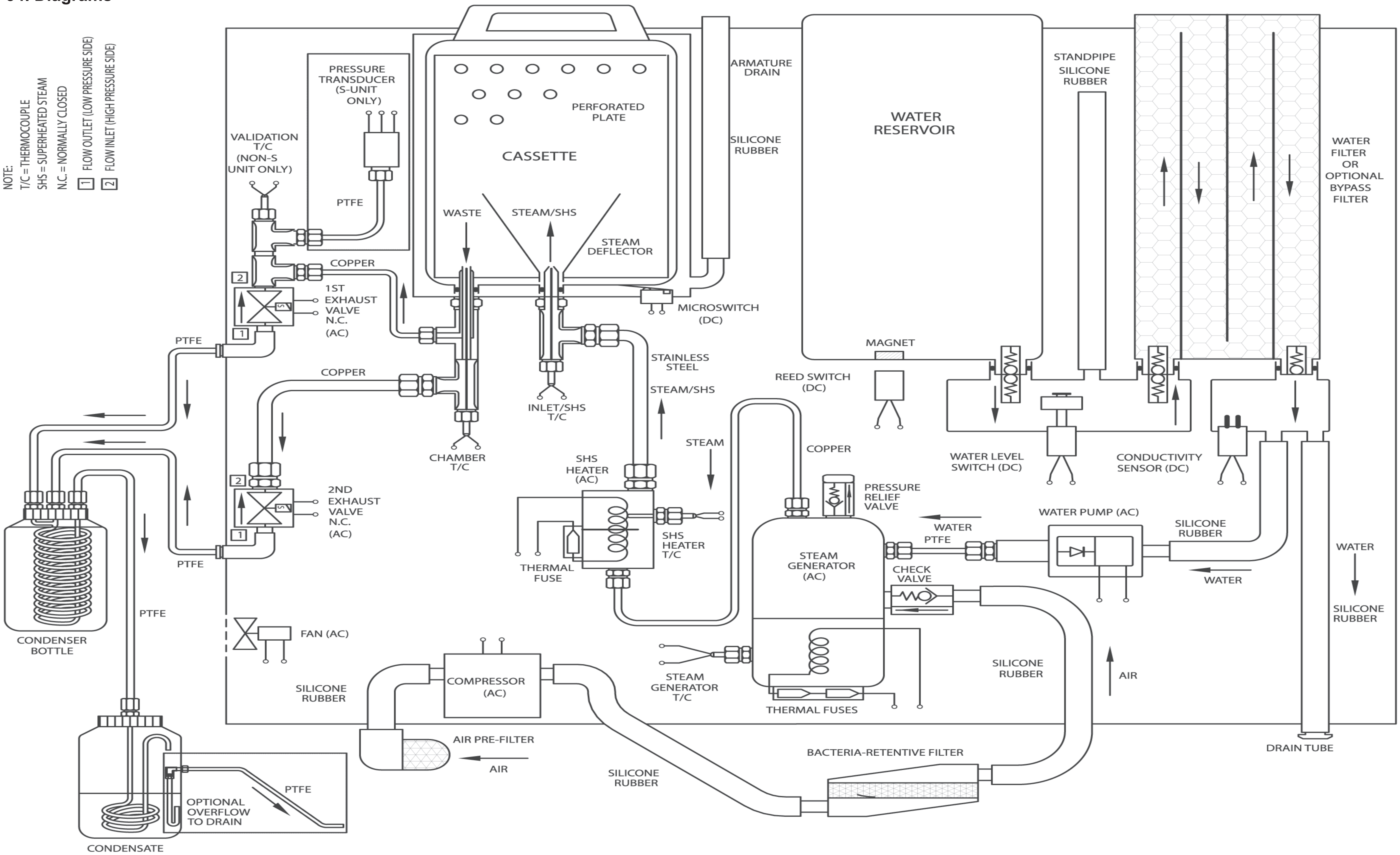
Exit – Exit menu without saving settings
Upon selection, current settings are discarded, not saved and unit restarts in normal mode of operation.

33. Spare Parts

Part Number	*Description*	*User*	*Service*
SCI134	Test Strip Indicators (250/box)	X	X
99-108332	Chemical Emulator 134ºC 3.5 min.	X	X
2OZPLUS	STAT-dri 2 oz	X	X
8OZPLUS	STAT-dri 8 oz	X	X
32OZPLUS	STAT-dri 32 oz	X	X
01-102119S	Biological Filter	X	X
01-103139S	Conductivity Meter	X	X
01-106848S	Filter Exhaust Insert	X	X
01-109556	Data Logger	X	X
01-101652S	Air Compressor Filter, C		X
01-106787S	Pressure Relief Valve A/B/C		X
01-104690S	Pressure Transducer, B/C		X
01-103141S	Control Box SciCan		X
01-100713S	Pump Tester SciCan		X
01-110471S	Pump, 7000		X
01-110804S	Pump, Tubing Kit 7000		X
01-110806S	Pump, Tubing Kit 7000S		X
01-110472S	Boiler, 7000		X
01-110473S	Boiler, 7000S		X
01-110474S	Auxiliary Heater, 7000		X
01-110475S	Auxiliary Heater, 7000S		X
01-110476S	Auxiliary Heater tubing, 7000/S		X
01-110477S	Auxiliary Heater Triac, 7000/S		X
01-110478S	Compressor, 7000/S		X
01-110479S	Compressor Elbow Tube Fitting, 7000		X
01-110527S	Solenoid Chamber, 7000		X
01-110528S	Solenoid Validation, 7000		X
01-110529S	Solenoid Tubing, 7000		X
01-110480S	PCB 7000		X
01-110481S	PCB 7000S		X
01-110482S	PCB Power Board/Auxilary Heater, 7000		X
01-110483S	PCB RFID Board, 7000		X
01-110484S	PCB Data Logger Board, 7000		X
01-110485S	PCB Data Logger Power Supply, 7000		X
01-110486S	PCB Mounting Bracket, 7000		X
01-110487S	PCB USB Upgrade Kit, 7000		X
01-110488S	PCB RFID Antenna Assembly, 7000		X
01-110489S	Bio-filter holder, 7000		X
01-110490S	Fan, 7000		X
01-110491S	Fan Cover Plate, 7000	X	X
01-110493S	Reservoir Inlet, 7000		X
01-110293S	Reservoir Complete, Statim 7000	X	X
01-110328S	Reservoir Lid, 7000,	X	X

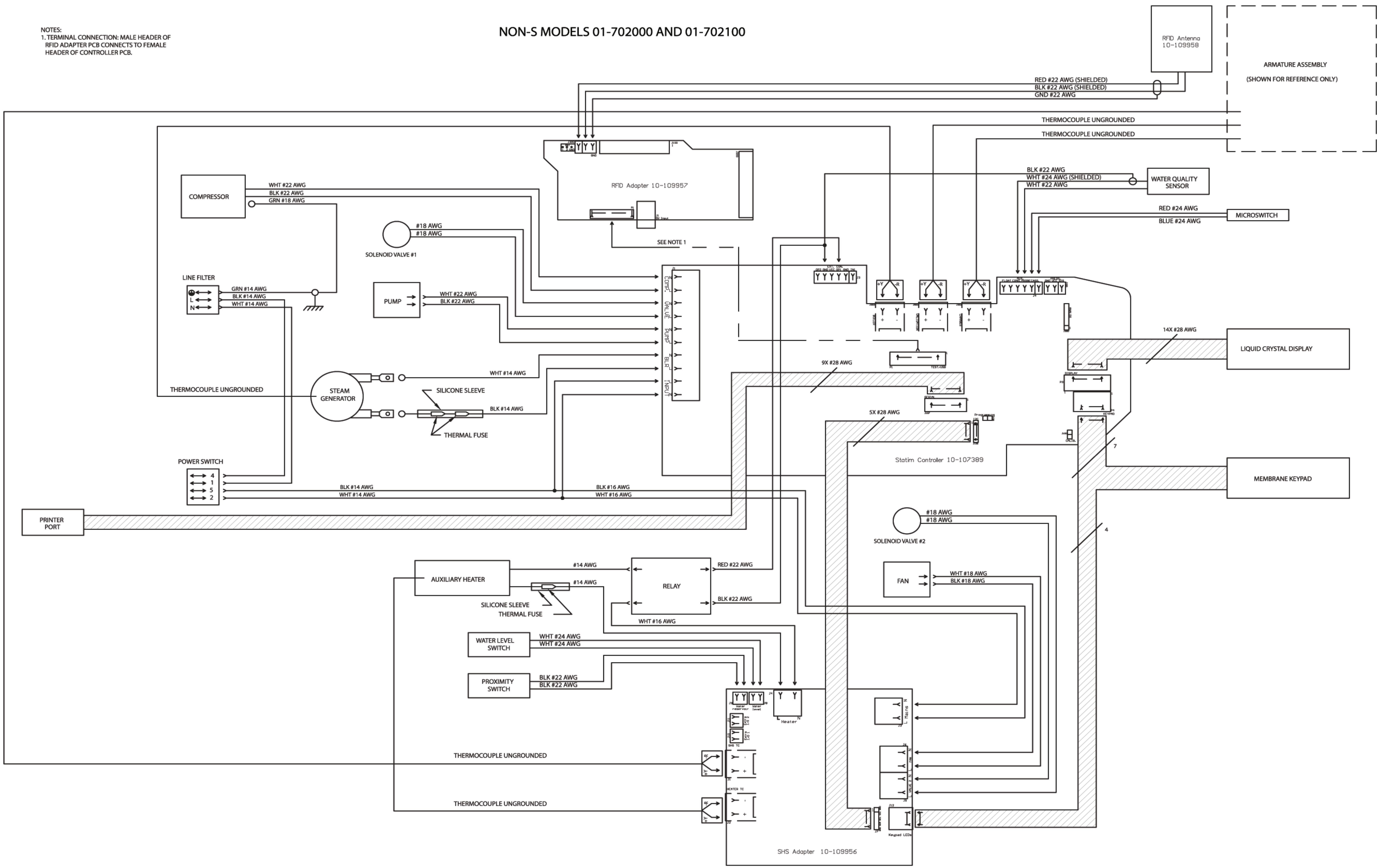
		User	Service
01-110327S	Reservoir Seal Kit, 7000	X	X
01-110288S	Cassette Complete, 7000	X	X
01-110289S	Cassette Tray, 7000	X	X
01-110290S	Cassette Lid, 7000	X	X
01-110329S	Cassette Lid Handle, 7000	X	X
01-110330S	Cassette Tray handle, 7000	X	X
01-110292S	Cassette Outlet Coupling, 7000	X	X
01-110296S	Cassette Coupling Seal Kit, 7000	X	X
01-110291S	Cassette Inlet Coupling, 7000	X	X
01-110294S	Cassette Perforated Rack, 7000	X	X
01-110297S	Cassette Tray Exhaust Duct, 7000	X	X
01-110295S	Cassette Seal Kit, 7000	X	X
01-110494S	Cassette Calibration w/ meter, 7000		X
01-110495S	Cassette Calibration, 7000S		X
01-110824S	Cassette Steam Deflector Clip 7000	X	X
01-110825S	Cassette Steam Deflector 7000	X	X
01-110301S	Cassette Pouched Load Rack, 7000	X	X
01-110519S	Cover Plastic Chassis Rails, 7000		X
01-110298S	Cover Complete, 7000		X
01-110520S	Cover Reservoir Compartment, 7000	X	X
01-110521S	Cover Logo SciCan, 7000	X	X
01-110522S	Cover Fascia Front Left, 7000		X
01-110523S	Cover Fascia Front Cassette, 7000		X
01-110524S	Cover Fascia Gasket, 7000		X
01-110525S	Cover LCD Only, 7000		X
01-110526S	Cover Keypad Complete, 7000		X
01-110496S	Armature, 7000		X
01-110497S	Armature Guide Rails, 7000		X
01-110498S	Armature Isoplates, 7000		X
01-110499S	Armature Probe Inlet, 7000		X
01-110500S	Armature Probe Outlet, 7000		X
01-110501S	Armature Overflow Tube Elbow, 7000		X
01-110502S	Armature Microswitch, 7000		X
01-110503S	Push-in Fittings, 7000		X
01-110504S	Power Switch, 7000		X
01-110505S	Line Filter, 7000		X
01-110506S	Bottle Waste Complete, 7000	X	X
01-110299S	Bottle Waste/Condenser Kit, 7000	X	X
01-110508S	Bottle Waste/Condenser Fitting, 7000	X	X
01-110509S	Bottle Exhaust Tubing Kit, 7000	X	X
01-110300S	Bottle Overflow-to-Drain Kit, 7000	X	X
01-110510S	Check Valve, 7000		X
01-110511S	Gray Tubing, 7000		X
01-110512S	Levelling Foot, 7000	X	X
01-110513S	Thermocouple Inlet/Outlet, 7000		X
01-110514S	Thermocouple Outlet, 7000S		X
01-110515S	Thermocouple Validation, 7000		X

		User	Service
01-110281S	Power Cord A, 7000	X	X
01-110282S	Power Cord B, 7000	X	X
01-110283S	Power Cord C, 7000	X	X
01-110284S	Power Cord D, 7000	X	X
01-110285S	Power Cord E, 7000	X	X
01-110286S	Power Cord F, 7000	X	X
01-110287S	Power Cord G, 7000	X	X
01-110361S	Power Cord H, 7000	X	X
01-110516S	Packaging Service Loaner, 7000		X
01-110517S	Packaging Complete 7000		X
01-110518S	Bench Service Kit, 7000		X
01-110754S	Mat Silicone 7000	X	X
01-110787S	Packaging Outer Box 7000		X
01-110789S	Cassette Condensate Deflector 7000	X	X
SCWF1	Water Filter Cartridge	X	X
SCWF6	6 Pack of SCWF1 Water Filters	X	X
SCWFBP	Water Bypass Cartridge	X	X
01-110817S	Microprocessor Statim 7000S		X
01-110816S	Microprocessor Statim 7000		X
01-110885	Statim 7000 PCD	X	X
01-110886S	Statim 7000 PCD Spare Part	X	X
01-111395S	Bottle Condenser Kit, 7000	X	X


NOTE:
T/C = THERMOCOUPLE
SHS = SUPERHEATED STEAM
N.C. = NORMALLY CLOSED
1 FLOW OUTLET (LOW PRESSURE SIDE)
2 FLOW INLET (HIGH PRESSURE SIDE)
PRESSURE TRANSDUCER (S-UNIT ONLY)
VALIDATION T/C (NON-S UNIT ONLY)
PTFE
COPPER
1ST EXHAUST VALVE N.C. (AC)
2ND EXHAUST VALVE N.C. (AC)
CASSETTE
PERFORATED PLATE
WASTE
STEAM/SHS
STEAM DEFLECTOR
CHAMBER T/C
INLET/SHS T/C
ARMATURE DRAIN
SILICONE RUBBER
MICROSWITCH (DC)
STAINLESS STEEL
STEAM
SHS HEATER (AC)
SHS HEATER T/C
THERMAL FUSE
WATER RESERVOIR
MAGNET
REED SWITCH (DC)
STANDPIPE SILICONE RUBBER
WATER FILTER OR OPTIONAL BYPASS FILTER
WATER LEVEL SWITCH (DC)
CONDUCTIVITY SENSOR (DC)
PRESSURE RELIEF VALVE
WATER
WATER PUMP (AC)
STEAM GENERATOR (AC)
CHECK VALVE
STEAM GENERATOR T/C
THERMAL FUSES
AIR
DRAIN TUBE
CONDENSER BOTTLE
FAN (AC)
COMPRESSOR (AC)
AIR PRE-FILTER
BACTERIA-RETENTIVE FILTER
OPTIONAL OVERFLOW TO DRAIN
CONDENSATE BOTTLE

NOTES:
1. TERMINAL CONNECTION: MALE HEADER OF RFID ADAPTER PCB CONNECTS TO FEMALE HEADER OF CONTROLLER PCB.

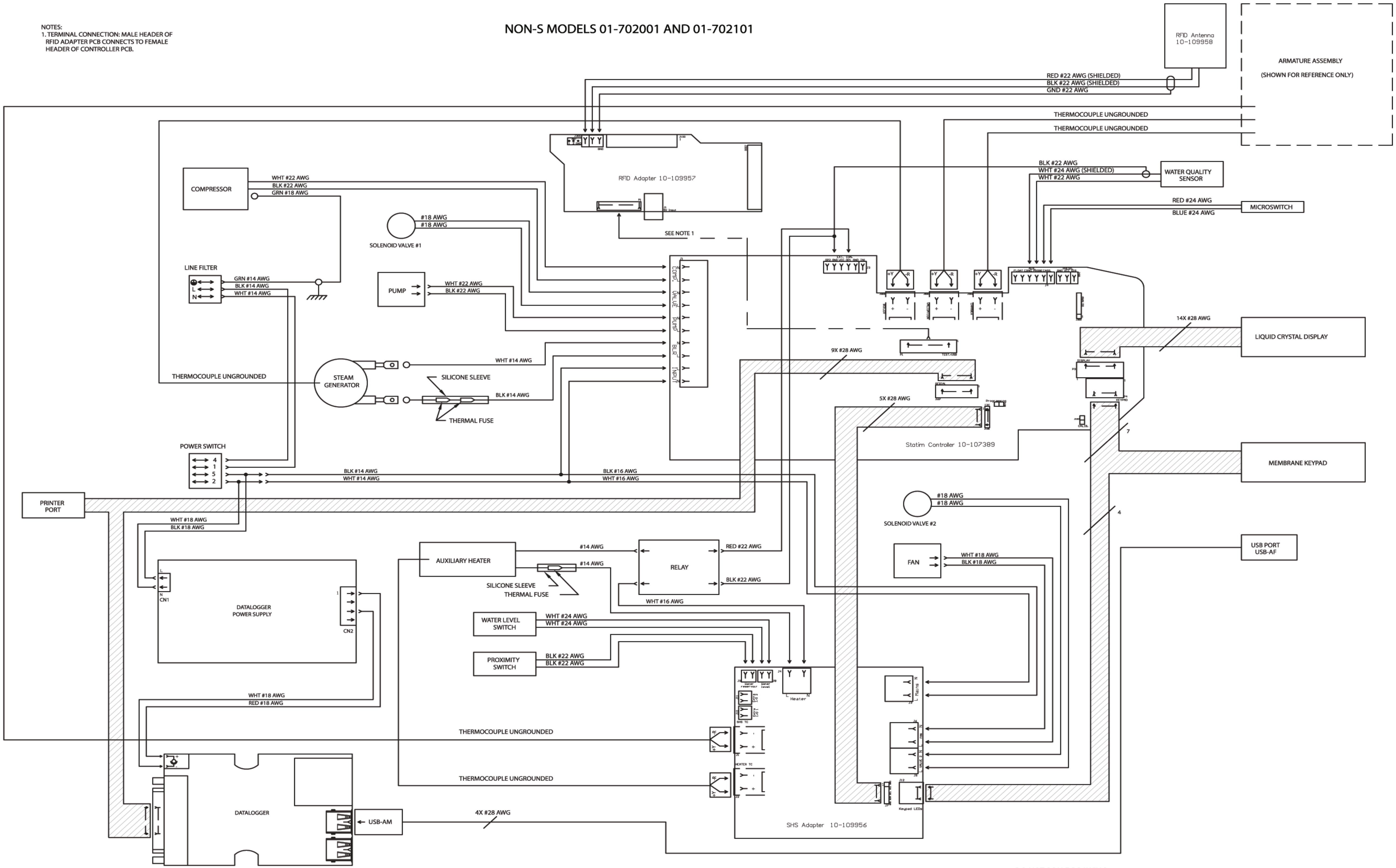
NON-S MODELS 01-702000 AND 01-702100



DO NOT SCALE DRAWING
CONSULT SCICAN R&D FOR CLARIFICATION

NOTES:
1. TERMINAL CONNECTION: MALE HEADER OF RFID ADAPTER PCB CONNECTS TO FEMALE HEADER OF CONTROLLER PCB.

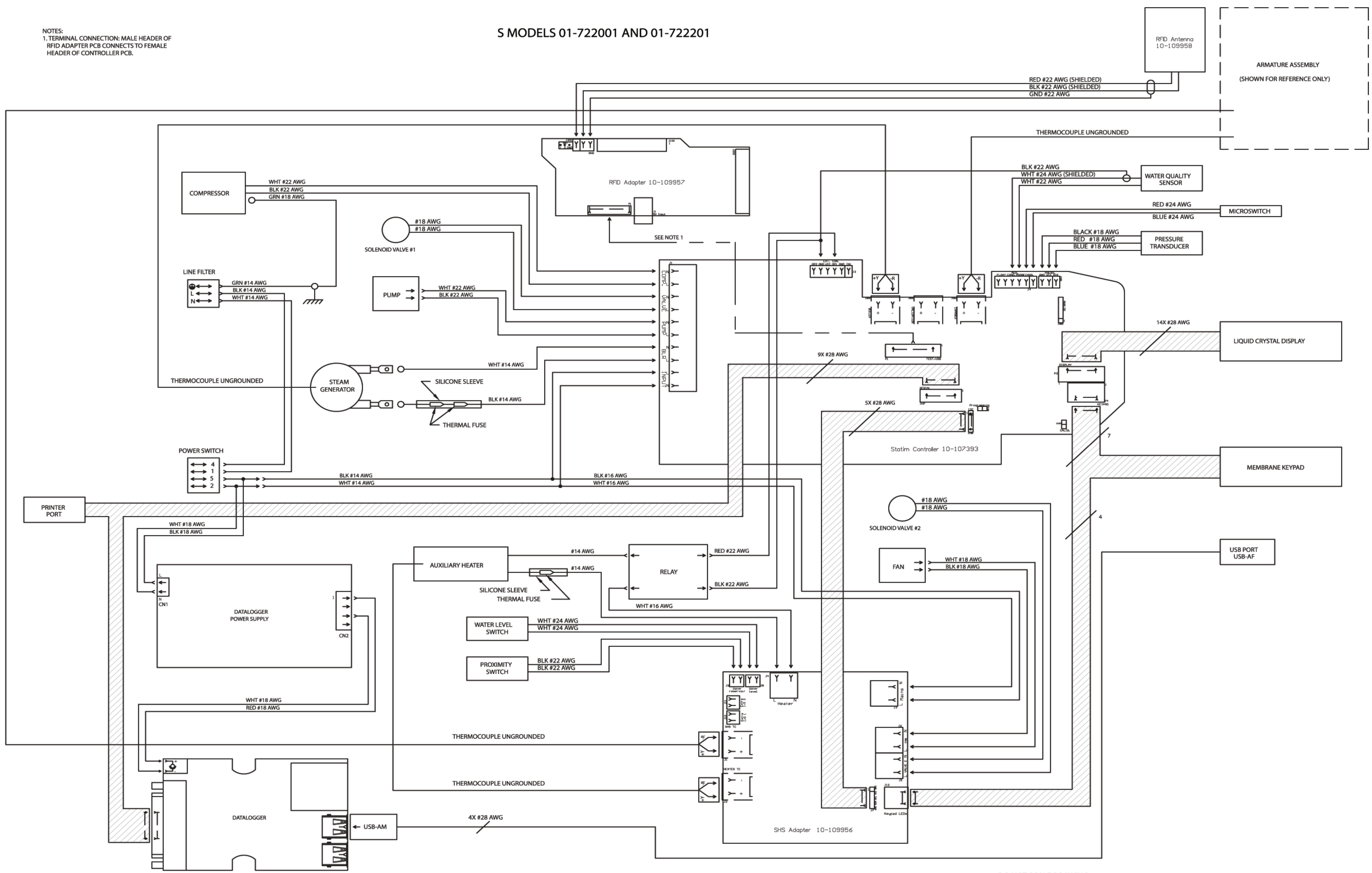
NON-S MODELS 01-702001 AND 01-702101



DO NOT SCALE DRAWING
CONSULT SCICAN R&D FOR CLARIFICATION

NOTES:
1. TERMINAL CONNECTION: MALE HEADER OF RFID ADAPTER PCB CONNECTS TO FEMALE HEADER OF CONTROLLER PCB.

S MODELS 01-722001 AND 01-722201



DO NOT SCALE DRAWING
CONSULT SCICAN R&D FOR CLARIFICATION